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ON A FORM OF BRONCHITIS

(SIMULATING PHTHISIS)

WHICH IS PECULIAR TO CERTAIN BRANCHES OF THE POTTING TRADE.

A GRADUATION THESIS

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ON A FORM OF BRONCHITIS PECULIAR TO THE POTTING TRADE.

It has been said that we acquire real wisdom from our failures only, and not from our successes in life. Perhaps in nothing is this axiom more strikingly exemplified than in the practice of medicine, inasmuch as it is governed by none of those fundamental laws which characterize the so-called "Exact Sciences:" so that, on the one hand, we cannot predict with absolute certainty, that any one disease will assuredly be attended, in every instance, by an unvarying train of physical signs and symptoms; nor, on the other hand, can we assert that these signs and symptoms are invariably and indubitably the manifestations and concomitants of one and the same disease at all times. Were it otherwise, our diagnosis would be almost infallible, and liability to error would be nearly excluded. But this very liability, which attaches to medicine, confers lasting advantages which are of peculiar worth. The lessons which an error in diagnosis teaches are sometimes painful, always humiliating, but never forgotten; they remain, as it were, indelibly stamped in the memory. The painstaking and honest investigation of one case of mistaken diagnosis, with its possibly disastrous consequences, imparts more instruction than the consideration of many conducted to a successful issue. The one gradually

but speedily fades from the recollection: the other exists, mentally photographed, so to speak, with all attendant circumstances in minutest detail. Some of the most valuable researches in Pathology and Medicine have originated in patient endeavours to comprehend the causes which have led to mistakes in diagnosis.

The signs and symptoms proper to one disease have sometimes manifested themselves in another differing entirely from it in nature and essence, so that two distinct diseases have been confounded merely from some similarity in their phases. It is only when their morbid anatomy has been carefully investigated and patiently studied, that we are able rightly to interpret their pathology, and to reconcile apparently opposite diseases with nearly identical signs and symptoms. Thus some trades and occupations are peculiarly obnoxious to a form of disease closely resembling phthisis in nearly every feature, with the exception that tubercle is generally absent. I refer particularly to the so-called "black phthisis," "cotton phthisis," "stone phthisis," and "knife-grinders' phthisis." It is to be regretted that these names have been thus applied, for phthisis conveys the idea of tubercle, and in these diseases the existence of tubercle is purely accidental and not necessary to their constitution. The lung-substance, it is true, undergoes destructive inflammation and excavation, just as in phthisis; but Pathology declares this to be simply the sequel to protracted bronchitic irritation, induced by the long-continued inhalation of irritating particles of various kinds.

It was not until the year 1860 that I became aware of the existence of a similar form of disease amongst potters; and, so far as I can ascertain, no account of the affection has ever been placed on record. I venture,

therefore, in this way to bring the subject under the notice of the profession, and to communicate such information as I have been enabled to collect, accompanied by such deductions and remarks as may, I hope, tend to elucidate the nature and cause of this distressing malady.

My attention was first drawn to this subject by an error in diagnosis so long ago as the year 1859. In the summer of that year I was appointed House Surgeon to the North Staffordshire Infirmary, in the midst of a dense population composed for the most part of potters, colliers, and iron-workers. The following winter soon indicated what diseases were peculiar to each of these classes, and clearly demonstrated that chest-affections were prevalent in the district, and especially amongst the potters. One of those admitted early with pulmonary complaint, under the care of Dr. Wood, was a potter of middle age, whose sunken emaciated appearance, and distressing cough and hot dry skin, at first sight gave one the impression that he was the victim of phthisis. Further examination after he was in bed only confirmed the unfavourable opinion that had been formed of his case. There was dulness on percussion at both apices with flattening of the chest surface, whilst immediately below, the lungs were unusually resonant, and the stethoscope conveyed a gurgling sound to the ear. There was prolonged expiration at the anterior margins of the lungs and anterior surface of the lower lobes. Some places in the middle of the right lung were dull on percussion, and here loose crepitation was audible. The patient had had several "attacks on the chest" before, but lately his cough had never left him, and his breathing had become greatly oppressed. He had gradually lost flesh, and his appetite had deserted him. He

expectorated profusely a purulent matter, occasionally darker in colour than usual, but not sufficient to attract particular notice. There was no diarrhœa. I was unable to detect any pulmonary fibres in the expectoration under the microscope, but had no hesitation in pronouncing the case to be one of tubercular phthisis that would end fatally. I was however greatly surprised, at the post-mortem examination of the body, to find not even a trace of tubercle in the lungs! Cavities indeed there were, and a puckering and thickening of pulmonary tissues such as I had never witnessed in cases of phthisis, whilst the minute bronchial tubes possessed a more than cartilaginous hardness to the touch, and the lung was infiltrated or discoloured with a black matter, somewhat like those to be described hereafter, only in a much less degree. Several other cases occurred in Dr. Wood's wards similar in character, but varying according to their stages of progress, so that it was impossible not to recognise the existence of this peculiar malady. It was not however until the following winter that my mind was specially attracted to this subject by the occurrence of one or two cases unusually well marked, whose histories I subjoin, as they are nearly typical of the disease I am describing.

It becomes me to state here, that I am indebted to the kindness of my friend, Dr. Wilson Fox, for permission to copy these cases from his Hospital Case-Book for my thesis.

Case 1.—William Bowden, æt. 35, single, potter, admitted into North Stafford Infirmary, March 22, 1861.—Is a native of Exeter; reddish hair, light brown eyes, clear complexion; finger-nails rather clubbed and incurvated. Has had "asthma" as long as he can recollect. His father had "asthma," and died at 45. He

has never, so far as he is aware, had any severe illness in the chest; nor any other illness that he is aware of, except measles. Has never had hooping-cough; has come into hospital on account of extreme difficulty of breathing, which has increased greatly during the past three weeks; has not much cough, expectoration not much to speak of. Emaciation excessive.

Examination of Chest.—Respiration in great measure diaphragmatic. Expansion of thoracic parietes on inspiration very slight. Sternum from fourth cartilage is depressed. Intercostal spaces depressed. Clavicles very prominent, left more so than right. Ensiform cartilage greatly depressed. Respiration short and difficult, 28 per minute. A deep respiration is accompanied by a wheeze in expiration audible to bystanders. *Percussion* in front of chest unduly resonant everywhere. Precordial region resonant everywhere. No superficial cardiac dulness to be made out. Heart's apex beats in normal situation. Inspiration over front of chest weak and imperfect. Expiration prolonged to twice normal length, attended everywhere with sibilant and some sonorous râles. No moist râle in front. Vocal resonance in front weak. Posteriorly, right apex is dull as low as middle third of scapula; absolutely dull as low as infra-spinous fossa. At upper part of dulness, inspiration is blowing almost tubular; expiration blowing and prolonged. In middle third, inspiration is weak but tubular; expiration tubular and prolonged. Some fine moist râle heard with forced breathing at this spot. Vocal resonance so weak as scarcely to be audible anywhere. Voice rather hoarse. Left lung posteriorly dull in spots in middle third, mingled with places where percussion resonance is unusually resonant. Expiration is greatly prolonged over whole of this lung. Some fine

moist râles heard in spots here. No cavernous breathing in either lung. Appetite bad. Tongue covered with whitish fur. Bowels regular. Sweats much. Pulse very weak, 68.

Ordered Tr. Iod. fort. to right side. Nitrated paper to be breathed.

℞ Vin. Ipecac. ♏ x., Sp. Æth. Chlor., Tr. Camph. cō. *aa.* ♏ v. Mist. Acaciæ ℥j. t. d. s.

Full diet. Wine, 4 oz.

April 9th.—Very little relief to chest. Nitrated paper relieves him a little, but only temporarily. ℞ Inf. Ros. cō. ℥j. bis die.

April 28th. — Has been gradually losing strength. Great dyspnœa came on this morning. Face is now livid. Expectoration has ceased. Breath has gangrenous odour. Some dulness is now to be found under right clavicle, and there is a large loose moist râle there. Otherwise state of chest unchanged.—℞ Sp. Æth. Sulph. Sp. Ammon. Arom. *aa.* ♏ xv. Ac. Hydrocyan. dil. ♏ iij. Dec. Senegæ ℥ſs. Mist. Camph. ℥j. 4tis. horis sum. Omitte alia.

April 30th.—Patient died yesterday.

Post-mortem.—Heart entirely covered by lungs, otherwise healthy. Right lung contains at apex a large cavity filled with thick creamy adhesive pus. Cavity is situated at posterior part of organ. This lung is highly emphysematous, but is interspersed throughout with masses of black substance which cut firmly, mingled with whitish opaque elevated spots which are very firm. The blackish masses are of irregular extent, sometimes of the size of a walnut, and sometimes of a Maltese orange. Section of the whitish masses is gritty, that of black is smooth, and not much elevated above the surrounding tissue. Whitish spots are nowhere larger than

millet-seeds. Several smaller cavities are found in the centre of middle and lower lobes, all filled with pus of the same character as that at apex. They are all bounded by a fine wall, are all simple, crossed by trabeculæ, but not communicating with others. Left lung has the same characters, but to a less extent. Near its base and root is a spot of about three inches in diameter, filled with rough granular spots like those above described, but are much more free from colouring matter. Injection does not penetrate into any of these masses.

Abdominal viscera are healthy.

Case 2.—Charles Barlow of Hanley, æt. 36, married, admitted into North Stafford Infirmary, March 5, 1861. —A pale, emaciated-looking man, dark hair, grey eyes, sallow complexion. Is a hollow-ware presser. Has always been a sober man. Has had two children ; one dead of scarlatina, the other ill from epilepsy. Has suffered from some palpitation and from winter cough for the last seven years. Has never had rheumatism. Breath has been growing shorter of late, and he has had dyspnœa on exertion. Had no expectoration till two years ago. Sputum at first frothy, became subsequently viscid, and then purulent. Has never noticed it particularly black ; has rarely seen blood in it, which has never existed in more than a few streaks.

Present attack.—Caught a severe cold in October last. Recovered slightly, but never perfectly ; and was again taken worse at Christmas. Has kept his bed for some weeks before coming here. Says that expectoration has only become purulent during the past few weeks.

Present state.—Urine acid, scanty, very high colour, containing a faint trace of albumen, and a very con-

siderable quantity of purpurine. Face has slightly livid tint, very pale and sallow. Conjunctiva not congested, nor eyes prominent. Skin rather cold, cough very frequent, expectoration thick, purulent, running together into masses, not painful. Legs swollen, pit on pressure. Abdomen slightly swollen. Pulse 98, jerking, irregular. Respiration 32. Deeply formed thorax, flattened at both sides in lower lateral regions. Elevation movements exaggerated. Only very little expansion movement even on deep inspiration. There is undue resonance in anterior mediastinum. Resonance impaired under both clavicles, more so under right than under left. Both bases have diffused dulness, left more so than right. Large and small loose râles heard with inspiration and expiration all over front of chest. Expiration on left side not prolonged, but is so on right where it has a slightly blowing character. Sibilant râles, heard with inspiration and expiration, exist in lower two-thirds anteriorly on right side. Posteriorly, fine loose râles same as in front, heard at left base. Right base but little moist râle, a good deal of sibilus heard. Vocal resonance exaggerated at left apex and left base. No bronchophony.

Cardiac superficial dulness 1½ hands'-breadth transversely, and two hands'-breadth vertically, begins midsternum head of fourth cartilage, and extends to three inches below nipple: does not extend to right of sternum. Apex-beat very indistinct, not to be distinctly seen or felt. Murmur with first sound loud and harsh; heard most distinctly two inches below nipple, and half-inch outside line drawn vertically from it. It is propagated faintly towards axilla, and hardly at all towards sternum. No murmur at base. No murmur with second sound anywhere, but occasional reduplication at base. Ordered

turpentine stupes to chest. Beef tea Oj.—℞. Inf. Digital. ʒij. Mist. Expect ℥j. quater quotidie.

March 7th.—Continued to sink all yesterday. Ordered brandy, 3 oz. Now he is excessively prostrate, and face a livid pale. Expectoration greatly diminished.—℞. Sp. Æth. Sulph. ♏ xx. Vin. Ipecac. ♏ viii. Morph. Mur. gr. $\frac{1}{12}$ Dec. Senegæ ℥j. 4 quotidie. Death took place at 7 A.M. on March 8th.

March 9th.—*Post-mortem* 28 hours after death. Nothing remarkable externally. Rigor mortis still persisting. Thorax opened; only a small portion of heart uncovered by lung. In anterior margin of left lung, which overlies the heart, are several hard nodules, firm, solid, resisting the finger. Heart when removed is found much enlarged, particularly the left auricle. Left ventricle is also large, but its walls are not much thickened. Mitral opening admits tips of thumb and four fingers. Some puckering of edges of valve. Right ventricle greatly enlarged. Tricuspid valve much puckered. Right auricle enlarged. Microscopic examination shows much fat in muscular substance, both of auricles and ventricles. Aortic and pulmonary valves healthy.

Lungs.—Left lung firmly adherent throughout to pleura. Emphysematous at anterior margin, where nodules described are felt. Apex firmly adherent to pleura. When cut into, it is found to be almost entirely solidified at apex. When cut into here, the lung tissue is found to be converted into masses of firm fibrinous resisting matter, lying closely to one another, but separated by thin lines of condensed pulmonary tissue. All greatly blackened. These masses are about the size of walnuts. Interspersed among them are calcified masses, grating under the knife, scattered through the black fibrous masses, and sometimes existing in the centre of

these, giving them a mottled look. No cavity to be found, except in some places in centres of calcified masses, where cretification has not proceeded so far as in others, and substance breaks down when cut into. These masses exist scattered throughout the lung, both at anterior when cut into, and also at base. They appear to be encapsuled with firmer fibrous substance than rest of lung, but cannot be enucleated. They are intensely black in colour, and stand above level of cut surface, and are strongly resistent to the knife. Whole appearance of lung very black, even in emphysematous spots. Bronchi are highly nigrated. No ulceration anywhere, even in finest divisions. Black striæ on pulmonary pleura, wherever it is not adherent to costal pleura. Bronchial glands at root of lung filled with black matter. One which has softened in the centre is of the size of a walnut, and contains a matter not gritty, but of appearance, feel, and consistence of thick black grease. No black matter to be found in mucous membrane of bronchi even in finest divisions. Lobes of lung adherent. Right lung less retracted at side than left, but not so emphysematous at anterior margin; lobes adherent, but lung not attached to costal pleura. Exactly resembles left lung in appearance above described.

Liver normal size, presents nutmeg appearance with portal congestion. Is deeply stained with bile.

Kidneys contracted. Left contains many cysts. Under the microscope gives increase of fibrous tissue, and fatty degeneration of epithelium.

Stomach and Intestines and Brain healthy.

Case 3.—Thomas Jervis of Shelton, æt. 40, single, potter, admitted into North Stafford Infirmary on January 8, 1861. Has suffered from winter-cough for

many years, with increasing shortness of breath. Has had several bad attacks on his chest during the past four or five years. Has had a good deal of expectoration, at first frothy, but now purulent. Has never spat blood. Family healthy.

State on admission. Emaciated sunken appearance. Dark hair and grey. Grey eyes, fingers not clubbed. Respiration hurried. Frequent cough. Much purulent expectoration of grey colour, running together in masses, and very tenacious. Face rather flushed. Skin hot; not perspiring.

Physical examination of Chest. Dulness under right clavicle, but not absolute, extends as low as third rib. Absolute dulness under left clavicle as low as fourth rib. Both sides to the extreme base deficient in resonance. Under right clavicle inspiration harsh, altered towards termination, with fine subcrepitant râle. Expiration here blowing, not prolonged; not divided from inspiration, but attended also at close with fine subcrepitant râle. Spoken voice under right clavicle harsh, not bronchophonic. Whispered voice gives imperfect pectoriloquy. Under left clavicle inspiration harsh, expiration tubular, blowing, and prolonged. Neither inspiration nor expiration is attended with râle. At level of third cartilage, left side, inspiration has a distinct cavernous character. Vocal resonance bronchophonic, but no pectoriloquy on this side. Blowing character of expiration extends to base in front, left side, but loses tubular and cavernous character below fourth rib. A large loose râle, evolved in a few distinct bubbles in expiration, attends forced breathing over the whole of this side in front. No fine râle heard here.

Back right side. Imperfect dulness in right supraspinous fossa. Resonance at base moderately good.

Inspiration has the same characters as in front. Expiration more distinctly tubular and cavernous in supra spinous fossa. The fine râle heard in front is not audible here. Vocal resonance is cavernous in infra-spinous fossa, more markedly so than in front. It becomes bronchophonic in middle third of the scapula, below this it is simply intensified. On forced breathing a medium-sized mucous râle is heard over whole of right back below infra-spinous fossa.

Back left side. Dulness absolute in supra-spinous fossa. It is less so in infra-spinous fossa. Below this it is good. Inspiration blowing, but neither tubular nor cavernous, except at one spot near spinal column at middle third of scapula, where it has the latter character. Expiration almost inaudible in supra-spinous fossa. No râle, even on forced breathing, on this side posteriorly. No pectoriloquy. Vocal resonance is somewhat exaggerated throughout. It has a somewhat hollow sound at spot where expiration is cavernous.

Heart's apex in normal site. Dulness normal. Action rather irregular. Sounds are heard most clearly at base, but are unattended with murmur.

Tongue moist and clean. Appetite pretty good. Throat exceedingly sore. Voice hoarse. Has difficulty in swallowing. Follicles of throat enlarged. Epiglottis reddened, not ulcerated.

℞. Mist. Ferri Iod. ℥j. t. d. s. Ol. Morrhuæ ʒß. bis die.

℞. Ac. Hydrocyan. dil. ♏ iij. Vin. Ipecac. ♏ xv. Tr. Camph. cō. ♏ v. Aq. ℥j 4tis horis. Acetum Lyttæ under both clavicles. Sol. Argent. Nit. (gr. x. ad ℥j.) to throat. Full diet without beer.

Jan. 15th.—Cough better. Dulness remains the same, and also the other physical signs. Sputa the same.

Jan. 21st.—Left hospital at own request.

The lungs, which were injected in the case of William Bowden (No. 1), with a view to the further investigation of this disease, gradually decomposed, and were rendered useless. I hoped, however, to be able to secure another specimen to accompany this paper, but the difficulty of obtaining post-mortem examinations is so great, that it is only at long intervals that permission to examine a body is granted. Frequently it happens, that patients in a dying state insist on being removed to their homes to die, merely to avoid the possibility of a post-mortem examination without their sanction, should death occur in the Infirmary. My friend Dr. J. T. Arlidge, who succeeded Dr. Wilson Fox as Senior Physician to the North Stafford Infirmary, writes to me as follows in reply to my application for a diseased lung to illustrate this thesis :—"I am much interested in the question, but am deterred from working at the pathology by reason of the almost impossibility of getting post-mortems to ascertain the real condition in the several stages of the disease." This feeling of antagonism to post-mortem examinations is so strong in the Staffordshire potteries, that it can hardly be surpassed in any other district of England. Since my resignation in Nov. 1862 to the present time, but one post-mortem has been performed on a case of Potter's Bronchitis, of which, unfortunately, neither notes nor specimens were preserved.

The cases, whose histories I have just narrated, are only examples of the disease in its advanced stage, where the lung tissues are more or less completely disorganized ; and the admission of the patient to the hospital may be regarded as "the beginning of the end." The malady however is essentially progressive, and consists of three distinct stages. At the outset it differs neither in physical signs nor symptoms from an ordinary bronchitic

attack. There is nothing to arouse suspicion of more serious mischief. The features are well marked and characteristic, so that no doubt can be left on the mind that the first stage is one of acute, or more commonly sub-acute bronchitis. This gradually passes, after an interval varying in different cases, into the second stage, that of confirmed chronic bronchitis, with more or less emphysema. And now it is, when the patient is compelled through increasing dyspnœa and continuous cough to seek medical advice, that the real nature of the malady is suspected. Throughout the chest a general wheezing is heard, with much rhonchus and less sibilus; expiration sound greatly prolonged; bronchial breathing is usually audible about the middle of each lung (supposing the disease to be symmetrical), or rather above the middle, bronchophony being less constant; respiratory sounds generally are coarse and harsh, differing greatly from those of simple exaggerated respiration. There is dulness on percussion mostly about four fingers'-breadth beneath the clavicle; and exaggerated resonance over either lung towards the median line anteriorly, which is never absent in these cases. The other sounds are sometimes more audible behind than in front, but rarely so; and occasionally they may be heard equally well in both positions. There is some emaciation, and the patient says he has been losing flesh "a good while." The expectoration is copious and purulent in character, varied every now and then, when the attack is aggravated, with frothy liquid. The dyspnœa is persistent and does not occur in paroxysms. The respiration is peculiar, nearly asthmatical in character, and instantly arrests the attention. So striking is this symptom that I was able, after closely observing many cases, to diagnose accurately in nine cases out of ten, both the patient's particular occu-

pation, and the state of his chest, from his general appearance and this characteristic respiration. To pass from this condition into the third stage is an easy gradation, and is only a question of time. I am not prepared to say that the transition is inevitable, but I have yet to see the patient who has remained stationary in the second stage. The symptoms which obtain in the third stage have already been related in detail in the narrative of the three cases, so that nothing more need be said respecting them in this place.

Before proceeding further, I may remark, that this disease appears to be confined to certain branches of the potting trade, and not to be common to potters generally. I have never met with a patient suffering from the malady that was not either a "hollow-ware presser" or a "flat-presser," so that one is led almost irresistibly to the conviction, that beyond these departments the disease does not extend. I have looked for it most carefully in every patient engaged in other branches of potting, but without success. None of the men thus employed live long; they all suffer from chest affections, and if any escape, it must be by deserting their particular calling at an early period. But I am not prepared to state that they all are afflicted with this peculiar bronchitis, though it must be conceded, that when a number of men, engaged in the same pursuit and surrounded by the same circumstances, are liable to pulmonary disease from the nature of their occupation, it affords a strong presumption that the morbid processes would assume somewhat similar features in all, modified only by those peculiarities of constitution proper to each individual.

Now if it be true that this malady is confined to a certain class of artisans, it is clear that there must be something in the nature of the employment itself which

these men follow, or in the circumstances attending its prosecution, which renders them peculiarly obnoxious to the disease. A brief description of their daily work will render this apparent, and will greatly facilitate the future investigation of the pathology of the affection by affording some insight into the nature of the causes which lead to its development.

And first, of the "Flat-pressers." Under this name are included dish-makers, plate-makers, saucer-makers, and cup and bowl makers. They roll out a piece of prepared clay, which, when of proper thickness, they shape upon the mould. The material is used in a wet and ductile state, but bits of it get scattered over the floor, and rapidly drying, are stirred up by the feet of the boys who are continually running about the workshop. The atmosphere is thus more or less impregnated with a fine dust, clearly observable only when it lodges on a flat surface, or is seen in the sunshine during a bright day. The articles made by the flat-pressers are carried immediately into the "stove" or drying-room (to be presently described), by young boys, who are kept running to and fro all day, thereby filling the atmosphere of the shops with dust. The quantity of dust varies according to the cleanliness of the place. Some workshops are swept daily, others only once a week, and of course the operatives employed in the latter are more exposed to inhale dust than those in the former. But even in those establishments where the floors are swept daily, the dust raised in the process has not time to settle again before the people commence work.

The temperature of the workshops depends upon the heat of the "stoves," which are close at hand, and this, in its turn, is regulated by the sufficiency or deficiency of the supply of moulds. When the men are well sup-

plied with them it is not necessary to hasten the process of drying, and the "stoves" need not be so highly heated. When, on the other hand, there is a deficiency of moulds, the potters endeavour, by way of compensation, to hasten the process of drying, in order that the moulds may be again soon ready for use.

Dish-makers are less exposed to heat and dust than plate and saucer makers, the operations of the former being of slower progress. The "stoves," therefore, do not require to be so highly heated, and it is less essential to have them placed near the men.

China flat-pressers are less exposed to heat, but quite as much exposed to inhale dust as those who work in the commoner material. China articles are partially dried on a shelf before being placed in the "stove," which therefore requires to be neither so highly heated, nor to be placed so near the workmen.

Saucer-makers create much dust in giving an edge to the saucers after they have been dried in the "stove."

"Hollow-ware pressers" or "squeezers" are employed in the manufacture of jugs and other kinds of hollow ware, which are formed by pressing the clay inside the mould. Their occupation is much more laborious than that of the flat-pressers, owing to the size of the ware they manufacture, *e.g.*, ewers and soup-tureens. They do not employ any assistants, and carry their own moulds into the "stoves." They are exposed to the same influence as the "flat-pressers," and though their work proceeds more slowly, and it is not necessary to place the "stove" so close to the workman, yet this is only an apparent advantage, for the hollow-ware presser has to transfer his moulds to the stove himself, and experiences its injurious effects to the fullest extent. I have observed that pulmonary affections are more prevalent amongst the work-

men in this particular department than in any other branch of the potting trade.

The "Stove," to which I have alluded above, is a little room, or rather oven about 13 feet square, and from 8 to 12 feet high, partitioned off from the shop, closely confined except at the door, and without windows. They are fitted inside with shelves, on which the moulds with the moist ware upon them are placed, in order that the ware may be dried sufficiently to be removed. In the centre of the room is a large cast-iron stove or furnace, which I have often seen heated to redness. As these "stoves" are placed in the workshop, and frequently, especially among plate-makers, close to the operatives for the sake of convenience, the atmosphere in which they work is necessarily of an elevated temperature, and very dry. The communication between the two is uninterrupted, a doorway alone separates them. In one of these "stoves" or drying-rooms the thermometer rose to 120°, in another to 130°, and in a third to 148°.

I proceed, in the next place, to consider the nature and progress of those morbid processes, which produce such extensive alterations in the texture and such impairment of function of the pulmonary organs, as detailed in the cases given above, and which seem to terminate in the disorganization and ultimate excavation of the lung tissue itself.

It is not difficult to understand how the acute attack of bronchitis invades these operatives. There are two causes which, either singly or combined, are sufficient to explain this. The one is the sudden transition from the highly heated and very dry atmosphere of the workshop to the cold air of the streets, and the low temperature and superabundant moisture which invariably prevail during certain seasons of the year in districts with a clay

subsoil; the other is the constant inhalation of the particles of fine dust which abound in the atmosphere of the shop. The potters, as a class, are greatly below the average in vigour and robustness of constitution; inheriting, as they mostly do from their parents, a cachectic habit, they have the appearance of sickly plants; their vitality is low and offers little or no resistance to the access of disease. The elevated temperature to which they are exposed may predispose them to the inroads of disease generally, *indirectly* by modifying the amount of oxygen inspired, and *directly*, by elevating the sensibility of the heated surface to impressions of cold. This probably of itself may be sufficient to give a *special* direction to the general predisposition, and to render the pulmonary organs in particular liable to morbid lesions. But when to this is superadded the presence of irritating particles of fine dust throughout the mucous tract of the bronchial ramifications, it is no longer matter of surprise that disease should assume the bronchitic form.

It may be objected that the evils arising from alternations of temperature are greatly lessened, if not altogether prevented by the influences of habit? Doubtless, "the power of accommodation in the body, depending on the generation of animal heat, and on the functions of the lungs and of the skin, provides in the healthy state against all changes which are not in excess," as Sir Henry Holland observes. But when these functions are impaired, or the body otherwise disordered, as usually obtains in potters, every such change has influence, either by disturbing the balance of circulation between the external surface and the membranes or different glandular structures within the body, or by checking or augmenting the discharge of perspirable matter. And yet the objection in some instances holds good. Every now and then we

meet with cases which have assumed a chronic character from their onset, and acute symptoms have never formed a part of their history. And this is the more remarkable, when we take into consideration the twofold nature of the combination to which these patients have been exposed. How much of this immunity is due to the influence of habit, and how much to individual idiosyncrasy, it is difficult to determine. Probably they both have weight though not equally. We certainly know that the sensibility of that most sensitive of mucous surfaces, the conjunctiva, to the presence of foreign bodies, gradually diminishes when the extraneous matter has become permanently established in its tissues. There is, so to speak, a reconciliation between them. May it not then be assumed, that in a similar manner the bronchial membrane gradually becomes accustomed to the irritating dust, and never manifests symptoms indicative of the acute form of inflammation? The two cases, pathologically considered, are not strictly parallel, and I refer to the conjunctiva as an exemplification merely of the modifying influence of habit in the development of disease.

But the question still remains, Why is it that the same causes produce in one person the acute variety, and in another the chronic form of bronchitis? The solution of this problem is a matter of infinite difficulty. We are in the habit of attributing it to idiosyncrasy. But this is equivalent to acknowledging our inability to give a satisfactory answer to the question. We cover our ignorance with this name. It is a conventional phrase, and so perhaps is convenient, but it adds nothing whatever to our previous knowledge of the subject.

I think I have observed that, as a rule, persons with a quiet, low, and rather languid pulse, whose vitality is somewhat below par, as it is called, are mostly liable to

chronic diseases; whilst, on the other hand, those in whom the vital processes are carried on energetically, and whose full bounding pulse would seem to carry health to every part of the body, have appeared to be singularly obnoxious to the attacks of acute diseases. In these latter, too, disease extends with greater rapidity, and pursues a more uniformly fatal career; as if what formerly contributed to an excess of healthy action, so to speak, now *mutatis mutandis* materially assisted in the development of a morbid action. The same may be said perhaps with equal truth of children, with whom acute diseases are notoriously fatal and rapid in their course. But amongst potters robust health can hardly be said to exist, so that in their case we have not to consider the form which the same disease will assume in a strong person and in a weak person; but rather under what aspect will it manifest itself in a weakly person, and in one more weakly? My own observation leads me to the conclusion, that in the one case the disease is developed in a sub-acute form, and in the other in a chronic shape. The conviction that the lower the state of the vital powers the greater is the tendency of disease to chronic development, and *vice versâ*, seems to my mind to be almost irresistible.

In the cases under consideration, however, the establishment of the chronic form is simply a question of time. That the occurrence of a disease once leads to a predisposition to other attacks of the same, certain specific diseases excepted, is a fact which all must admit. And in practice it is found that bronchitis is especially apt to recur every winter in those who have once been the subjects of it. Amongst potters it is not unusual for an acute or sub-acute attack gradually to pass into the chronic form, even in summer time, and then to

remain permanent. There is always more or less secretion from the bronchial tubes, but not sufficient to attract attention or to hinder from working. It is only when the winter weather sets in, when they "catch cold," and the symptoms are exaggerated, that they are driven a second time to the Infirmary. Then we learn that ever since their first illness they have suffered from shortness of breath (or as they express it, have been "touched in their breathing"), and a short cough; that lately they have been getting weaker, and the dyspnœa and cough have increased in severity so much as to render them unable to follow their employment any longer. When this state of things once obtains, it is commonly persistent, modified only by atmospheric changes or constitutional disturbance. Meanwhile anatomical changes are taking place in the structures of the lungs, till a condition is reached such as that in the cases narrated, which is no longer consistent with the proper performance of function and the maintenance of life.

What are those changes? Independently of the thickening and hypertrophy of the walls of the bronchial tubes resulting from inflammation, the presence of fine dust acting as a foreign body creates irritation of the mucous surface, followed by exudation from the bronchial membrane in which probably the dust is imbedded. In this way the tubes become narrowed directly, and respiration is impeded; and indirectly by the pressure of infiltrated exudation-matter which sometimes extends beyond the walls of the tubes, and encroaches on the adjacent lung substance. This diminution of calibre and constriction may gradually lead to obliteration of the finer bronchi, and to collapse of the air vesicles in which they terminate. Nay more, it is not impossible

that particles of fine dust may find their way into the minute air-cells themselves, and induce changes in them similar to those which take place in the air-tubes.

But this induration-matter may impede the function of the lung-substance in another way, by obliterating the vessels distributed to it and cutting off its supply of blood, so that atrophy of the tissues follows; and by obstructing the capillary circulation local congestion is favoured, and the blood but imperfectly oxygenated. Hence arises distressing dyspnœa and a dusky hue of the face.

Under circumstances such as these it is, I apprehend, that the emphysema recorded is apt to occur. Many are the theories that have been offered in explanation of its mechanism, and none of them is entirely satisfactory. Most of them have some truth in them, but not the whole truth. Neither of them is applicable in every instance.

Dr. Williams maintains that distension is the consequence of extra work thrown upon the healthy vesicles, the air-cells communicating with the plugged bronchi (in bronchitis) escaping inflation. To this it might be objected, and very justly, that at the end of inspiration we have in the healthy chest 131 cubic inches of air, and the lungs can take up 119 inches more, if force be used, without causing emphysema; hence the lungs must be more than half useless for emphysema to follow as a consequence! Dr. Gairdner holds that when a lung is atrophied from any cause, if the chest expand normally, the residual lung must follow that the vacuum may be filled. This theory, however, seems to me to be untenable, for in phthisis we find that diminished capacity is compensated for by increased frequency of respiration. In pneumonia, too, the same phenomenon is observed;

and yet emphysema in pneumonia is indubitably a great rarity, and in phthisis the alliance is but seldom met with.

These are the views which are most popular at the present day, but they fail to elucidate the cases under consideration. I venture, therefore, to offer the following explanation, as that which coincides most readily with the anatomical characters of the disease I am describing:—

It is not improbable that the act of coughing of itself is sufficient to cause some dilatation of even healthy air-vesicles if continued for a number of years; for the glottis being closed, and the walls of the chest, the diaphragm, etc., thrown into violent contraction, the pressure that is exercised upon the air-cells during the act must be enormous. But when to this is added the obliteration of some vesicles, the diminished expansion of others, and obstruction of the finer bronchi through the infiltration of exudation-matter, the strain that is thrown upon the patulous tubes and cells is necessarily so much the greater, whilst their elastic resistance remains the same, and dilatation is the consequence.

If, then, such change can take place in air-cells whose walls are healthy, how much more likely is the distension to occur in vesicles whose parietes are degenerated? I have already shown in what manner the small vessels surrounding the air-cells are obliterated; and the nutritive supply being cut off, atrophy of the walls must follow as a natural sequence. Independently of this, however, the mere act of distension alone by compressing the capillaries between the vesicles cannot but interfere with the nutrition of the texture, and initiate atrophic changes favourable to further distension. This emphysematous condition is usually observed on the surface of the lung where it is most deficient of support.

Again, commensurate with this deficiency of nutrition in the air vesicles is the impairment of their elasticity and tonicity. They become as it were paralysed, and offer little or no resistance to the ingress of air in excess, whilst at the same time they contribute but feebly to its expulsion; a large portion of it apparently remaining stagnant, and the remainder being slowly expired. When the respiratory process is accelerated, as under unwonted exertion, inspiration and expiration become strangely commingled, and produce the extreme dyspnœa and wheezing so characteristic of emphysema; the normal exchange of oxygen and carbonic acid is interfered with, and though the oxygenizing surface of the dilated cells is increased, the blood is no longer perfectly arterialized. I shall have occasion to allude to this subject again presently.

I proceed in the next place to consider the nature of the other *post-mortem* appearances that were observed, viz., the tough fibrous character of some portions, the black nature of others, and the extensive infiltration of the whole with minute cretifications.

"Induration-matter is endowed to a remarkable degree with the property of slow contraction—a property which renders its presence most beneficial or most baneful; often becoming the seat of saline deposits." (Adventitious Products, Todd's *Cyclop. of Anat. and Physiol.*) It is not difficult to conceive how this exudation material mixed up with dust, slowly contracting and gradually hardening, sets up irritation in the surrounding tissues, and excites a species of chronic inflammation in them. The systemic disturbance, of course, is slight or imperceptible on account of the protracted nature of the invasion. Those portions which have not submitted to the further process of softening maintain their thickened

fibrous nature, and are recorded amongst the *post-mortem* appearances.

The blood itself being but imperfectly oxygenated by reason of a defective respiratory process, ceases to afford the necessary stimulus to the capillary system, and a condition obtains highly favourable to congestion and stagnation. The exudation-matter likewise contributes no small impediment to the free circulation in the minute vessels. I cannot, therefore, but regard this stagnation as one of the sources from whence the black matter in these cases originates.

It is generally believed that there is always a certain amount of melanic pigment present in the lung tissue and bronchial glands of even healthy persons, and that this has a tendency to increase with advancing age. Amongst potters, however, advanced age is seldom attained; and besides, the quantity of black matter is too large to be accounted for in this manner. It is, I think, highly probable, that in addition to the pigment normally present, the stagnation of the blood in the capillary system, by altering the character of the hæmatin, tends greatly to its augmentation. This view receives support from the researches of Wedl (*Pathological Histology*), who says: "It may be assumed with considerable probability that the pigmented involution originates for the most part from the dissolved colouring matter of the blood, which penetrates the cell-wall, and undergoes various changes of colour within the cell, although perhaps the pigment may also arise in a kind of carbonizing process of the protein substance contained in the cell."

In the next place, as the inflammatory process pursues its course the tissues soften and gradually break down, leaving cavities in the lung-substance filled with the pigmentary material of the disintegrated textures. In

some portions this is solid, or rather negatively firm, and in others thickly fluid, like black grease or cream, depending probably on the more or less advanced stage of the softening process in each case. But another and perhaps co-extensive source of this pigment is to be found in the inhalation of CO_2 to which these potters are liable in the "stoves" or drying-rooms. The stove itself (*i.e.*, the furnace) is a very common affair, certainly not tight at the seams, and allowing the free escape of CO_2 in the process of combustion. It is supplied abundantly with coal, that a high temperature may be maintained, and CO_2 therefore is very rapidly generated. The workshop is very imperfectly ventilated, so that a considerable quantity of CO_2 expired by the operatives accumulates and is again inhaled by them. May this not be the origin of the "carbonizing process of the protein substance contained in the blood-cells" mentioned in the quotation from Wedl?

Continental writers have entertained various opinions relative to the formation of pigment in the pulmonary organs, but have failed to throw much light on the subject.

Bichat supposes it to be owing to small bronchial glands extending along the surface of the pleura. Breschet believes that it is formed by the blood exhaled into the cellular tissue, stating that its chemical composition leads him to that conclusion. Trousseau says that it is produced by a misdirection of the natural pigments of the body, resulting from age, climate, or disease. Andral says that the black appearances are the result of secretion, and that it is more manifest as the individual advances in life. Heasinger agrees with Trousseau. Laenner appears to be doubtful as to the real origin of the black matter.

So long ago as 1813, Dr. Pearson (*Philos. Trans.*) drew attention to the subject in the following words:—"I think the charcoal in the pulmonary organs is introduced with the air in breathing. In the air it is suspended in invisible small particles, derived from the burning of coal, wood, and other inflammable materials in common life. It is admitted the O. of atmospherical air passes through the pulmonary air vesicles or cells into the system of blood-vessels, and it is not improbable that through the same channel various matters contained in the air may be introduced. But it is highly reasonable to suppose that the particles of charcoal should be retained in the minutest ramifications of the air-tubes, or even in the air-vesicles under various circumstances, to produce the coloured appearances on the surface and in the substance of the lungs."

Mr. Graham (*Edin. Med. and Surg. Jour.* vol. xlii.) attributes the deposit in the case of colliers to the inhalation of the smoke from their lamps whilst at work.

Dr. Makellar, too (*Edin. Med. and Surg. Jour.* vol. for 1846), holds the same view, but includes the inhalation of CO_2 generated in ill-ventilated pits, and that expired by the miners themselves. He observes: "It is not, therefore, to be supposed improbable that a portion of the infinitely small particles" (of smoke) "thus suspended in the atmosphere should effect a settlement in the more minute air-cells, and in course of time be conveyed to the interlobular cellular tissue by the process of absorption, and thence to the bronchial glands." Again, "there is little doubt that the bronchial glands are the recipients of a portion of the impurities which have been carried into the pulmonary structure by inhalation, and also those left after the process of oxygenation of the blood; and when it is fully ascertained, from

the character of the atmosphere, that deleterious matter in this form must be conveyed to the air-cells during respiration, there is little difficulty in coming to the conclusion that the black fluid found to such an extent in these glands is similar to, and a part of, that discovered infiltrated into the substance of the lungs. If we trace the black matter in the lymphatic vessels (which has been done) from the pulmonary organs to the bronchial, mediastinal, and thoracic glands, and from thence to the thoracic duct, we cannot but admit that it does find its way into the venous system, and thereby contaminates the vital current." In another place he remarks: "It is still my belief, that the carbon being once inhaled, there is an affinity found for that in the circulating fluid, and from its not being consumed, owing to a deficiency of O, there is a progressive increase going on."

These observations of Dr. Makellar coincide with the opinion of Wedl relative to the "carbonizing process;" and they both give confirmation to my view, that the pigment in the cavities and amid the indurations is due to stagnation of the blood in the capillary system, and ultimate softening and excavation; the blood having previously undergone the "carbonizing process" of Wedl, and the "contamination" of Dr. Makellar, in the manner already described by me.

There is much similarity in some features of Dr. Makellar's cases and mine, but with the carbonaceous deposit all resemblance ceases. (I may remark in passing that I have never met with a case of black phthisis in the colliers of North Staffordshire, probably because the mines are well ventilated, and the "Davy lamp" is in common use.)

Lastly, the cretifications remain to be considered. I

regret very much that I did not submit these to chemical analysis at the time. I hope, however, to continue my investigation of this subject so soon as I can procure another specimen.

If we regard the various fluid secretions of the body as so many simple saline solutions, whose chemical constitution is unerringly accurate, it follows that any deviation from this standard proportion of constituents will materially affect the character of the solution. If the balance between the fluid and solid elements be disturbed, so that the fluid be diminished, the solid must be precipitated; or again, if the solid be superabundant, the fluid remaining normal, the same phenomenon is observed. This deposition occurs also if the chemical relations of the materials of the secretion be destroyed by the presence of a foreign substance which interferes with the suspension of the saline elements in solution. Probably the existence of any obstacle in the excretory passages by which the exit of a fluid secretion is delayed may indirectly cause the solid constituents to be in excess, the fluid, or some portion of it, being removed by the absorbents, or even by evaporation or by exosmosis.

Instances of this calcareous deposition are furnished abundantly by the human body, and will readily recur to the mind of every one. Perhaps the most familiar of all with which we are acquainted is the occurrence of "tartar," as it is called, around the teeth. No one can doubt that this is precipitated from the saliva. It appears first as a layer of slimy mucus, which gradually hardens, and is succeeded by another layer which hardens in its turn, and so on till it accumulates in vast quantities. Calculi of the salivary glands are commonly regarded as depositions from the saliva; and though,

according to Berzelius, phosphate of lime does not exist at all in the healthy saliva, or only in small quantity according to Simon, yet these calculi are found to consist essentially of this salt; and the explanation offered by Dr. Walshe is, that "the excess of phosphate is generated through the influence of irritation of mucous membrane."

"The pulmonary parenchyma is an extremely frequent seat of concretions. The basis in which the saline material accumulates is by far the most frequently tuberculous; more rarely, the fibrinous substance of simple inflammatory exudation forms its nidus." From the analysis of healthy pulmonary mucus by Simon and Nasse, it is clear that phosphates are normally present in the secretion from the lungs. Hence, when the secretion of mucus is exaggerated, as in bronchitis, the proportion of phosphates is relatively increased. In the case of the potters we have in addition the constant irritation of an inflamed mucous surface by particles of dust, and therefore, if the hypothesis of Dr. Walshe be sound, an excessive generation of phosphates must ensue, and precipitation of them in the form of deposits take place. Again, the constriction and narrowing of the bronchial tubes, to which I have already alluded, impedes the exit of the secretion, which is thus rendered liable to a further increase of solid material by the removal of some of the fluid portion in the manner described.

This then is one way in which cretifications in the lungs may have origin. But it is too much to suppose, that in the cases under consideration they were thus formed. It is possible, but not probable. It seems to me to be more reasonable to regard these minute masses as concretions of fine dust in the ultimate vesicles. Countless particles are inhaled with each inspiration and

lodged in the air cells, inflammation is set up followed by exudation, and when contraction ensues the mass of dust is encapsuled, as it were, by the exuded material, and the vesicle itself possibly obliterated, or occupied by it. In the recorded cases they were all of small size, exceedingly numerous in every part of the lung, and similar in character and appearance, affording strong grounds for presuming that they had but one mode of origin.

Again, reasoning from analogy, these cretifications might probably be formed by the deposition of phosphate of lime from irritated mucous membrane upon the particles of dust regarded as foreign bodies, and forming, so to speak, the nuclei of the concretions. Just as happens in the urinary bladder, when substances are introduced from without they soon become coated with the salts suspended in the urine ; and as in the case of a plum-stone lodged in the trachea, which became encrusted with phosphate of lime ; so here, the dust plays the part of a nucleus around which the salts of the pulmonary secretion are gathered. Many other examples might be cited in illustration, but these sufficiently demonstrate my position. The observations of Dr. Walshe lend force to this explanation. Speaking of phosphate of lime he says : "So frequent is the occurrence of this salt in calculous masses on mucous surfaces, as to lead irresistibly to the conclusion, that mucous membrane has a specific tendency to secrete this salt, under certain conditions of local irritation."

The question next arises, Can anything be done in the way of treatment ? Probably removal from the workshop at the first onset of the disease, and abandonment of these particular branches of the potting trade, is the only method of arresting the further development of the malady. But the remedy rests chiefly with the manu-

facturers. Many of the workshops are so badly ventilated that they could not well be worse. Inprovement in this respect alone would be followed by corresponding improvement of the general health of the workmen. A sufficient supply of moulds in every manufactory would remove the temptation to hasten the drying process by raising the temperature of the drying-rooms. But the "stoves" are the crying evil. They are very primitive in construction; indeed, they are just what they always were; no advance whatever has been made in their structure for the past fifty years, notwithstanding that countless operatives have succumbed to the pernicious system. Parents are so well aware of the destructive nature of the employment, that many of them decline to apprentice their children to it. If the "stove" were built off from the shop, it would be something gained, but one that need not be entered at all would be a great boon.

Since writing the above, I learn that Messrs. Minton and Co. of Stoke-upon-Trent have erected a "stove" on this principle by way of experiment. I am sure it will effect a great saving of coal, and will recommend itself therefore. But of 168 manufacturers in the Staffordshire Potteries not all influenced by considerations for the wellbeing of their workmen, few will be inclined to adopt new-fangled notions, which are certain to involve some little outlay of capital at first. It will, I fear, be a work of time to introduce this self-acting stove into general use, and nothing but its economizing character will prevail with most employers, and lead them to adopt it. Till then, Potters' Bronchitis will continue rife in the district, and will carry its suffering victims as usual to a premature grave.

February 29, 1864.

(40)

INSANITY AND CRIME:

A MEDICO-LEGAL COMMENTARY ON THE CASE OF GEORGE VICTOR TOWNLEY.

BY

THE EDITORS OF THE "JOURNAL OF MENTAL SCIENCE."

"It continually happens in this country, where our legal system is the growth of ages, imperfections are naturally to be found which are patiently endured until some event occurs which places its defects so flagrantly before us that we set ourselves at once to the duty of remedying them."—THE LORD CHANCELLOR: *Speech on the First Reading of the "Lunacy Regulation Bill" in the House of Lords, February* 27, 1862.

LONDON:
JOHN CHURCHILL AND SONS,
NEW BURLINGTON STREET.
MDCCCLXIV.

TO

JOHN CHARLES BUCKNILL, M.D., LOND.,

FELLOW OF THE ROYAL COLLEGE OF PHYSICIANS,
VISITOR OF CHANCERY LUNATICS, LATE EDITOR OF "THE JOURNAL OF MENTAL SCIENCE,"
ETC. ETC. ETC.

The following Pages are Inscribed,

IN TOKEN OF ADMIRATION

OF HIS ABLE AND SUCCESSFUL EFFORTS TO ADVANCE

THE LITERATURE AND PRACTICE OF PSYCHOLOGICAL AND LEGAL MEDICINE,

AND OF OUR SINCERE FRIENDSHIP.

"It appears that all the metaphysical tests of insanity prove equally worthless in the balance of criticism, or the crucible of experience. How, then, it will be asked, are the difficult and arduous questions of criminal insanity to receive a practical solution? If no rules can be laid down with respect to the quality of mind which shall excuse, and that which shall inculpate the perpetrator of a criminal act, in what manner is murder to be distinguished from madness, felony from fatuity, crime from disease? Truly by *Medical Diagnosis*, founded upon all the circumstances of the case; upon all the mental and bodily phenomena; the history and the present symptoms; upon all those circumstances which enable a skilful and experienced physician to decide upon the existence or absence of disease of the brain affecting the mental functions."—*Unsoundness of Mind in Relation to Criminal Acts.* An Essay by John Charles Bucknill, M.D., Lond. &c. &c. 2nd edit.

INSANITY AND CRIME.

I. History of the Case.

George Victor Townley was tried at Derby, on the 11th and 12th December last, for the wilful murder of Miss Goodwin, a young lady of nearly twenty-three years of age, who resided with her grandfather, Captain Goodwin, at Wigwell Grange. He belonged to a respectable family living near Manchester, was about twenty-five years of age, and was described as a man of quiet and refined manners, a good linguist, and an accomplished musician. He had made the acquaintance of Miss Goodwin about four years before, at the house of one of his relatives in Manchester; a strong attachment was formed between them, and at the time of the murder they had been engaged for upwards of three years. Townley's want of means and of settled employment were impediments to marriage; and once the engagement had been broken off for a time, but had been soon renewed.

On the 14th August, Miss Goodwin wrote to Townley formally asking to be released from her engagement, apparently giving as an excuse the strong objection of her grandfather to its continuance. The true reason, however, was, that she had become attached to a clergyman who had been staying at Wigwell Grange. Most painfully affected by the letter, Townley, nevertheless, replied to it in a natural and sensible manner, saying that he was not the man to stand in her way, that the sooner it was all settled the better, but begging for a last interview, "though God knows what misery it gives me to say so!" To this request Miss

Goodwin appears to have consented at first—then to have written again to stop his coming, on the plea that she was about to leave Wigwell Grange for an indefinite time. Townley, nevertheless, went on the 20th August to Derby, and slept that night at the Midland Hotel. On the following morning he left Derby for Whatstandwell (the nearest station to Wigwell Grange), about half-past eleven reaching the Bull's Head Inn, where he ordered a bed. Thence he walked past the Grange to Wirkworth, and called on the Rev. H. Harris, a friend of the Goodwin family. To him—after inquiring about the clergyman who had been at the Grange—he said that he had written to release Miss Goodwin from her engagement, but that he had come to hear from herself that she gave it up, adding, "I know I am not a good match, and have no wish to stand in her way." His manner was that of an ordinary man, perfectly calm and collected. At the suggestion of Mr. Harris he returned to the Grange and, arriving there at twenty minutes to six, asked for Miss Goodwin; she met him at the drawing-room door, and they went into the garden together. Half-an-hour afterwards she returned to the house, but went out again at a quarter to seven. Between eight and nine she was seen walking up Wigwell Lane with Townley; and shortly afterwards a labourer, hearing a moaning noise, ran forward, and met Miss Goodwin staggering towards her home, "guiding herself by the wall," her face and the front of her dress covered with blood. She said that a gentleman down the lane had been murdering her, and begged to be taken home. As the labourer was supporting her in his arms, Townley joined them, confessed that he had stabbed her, and helped to carry her towards the Grange. He called her "Poor Bessie" several times, and said, "You should not have proved false to me." After a while they had to lay her down; the labourer went for help, and on his return Townley was trying to stop the bleeding. As they bore her towards the hall, Townley said "he was afraid she was dead, and bent down and kissed her." It was true she was dead, and the strange party carried her corpse to the house. At the gate Captain Goodwin met them, and in reply to his

question, who was the murderer? Townley acknowledged his act, and added, "She has deceived me, and the woman that deceives me must die. I told her I would kill her. She knew my temper." Two packets of her letters he gave up to Captain Goodwin, saying that he did not wish them to be brought into court, and these were destroyed unread. On his way to the station, with a policeman, he said, "I am far happier now that I have done it than I was before, and I trust she is."

As the facts of the crime admitted of no dispute, the defence set up for the prisoner was, that by the "mysterious dispensation of Providence he had been deprived of his reason to such a degree as to render him not amenable to the laws for the dreadful deed which he had undoubtedly committed." Evidence was given by the prisoner's maternal aunt, that his grandfather's sister had destroyed herself, and was supposed to be insane; that a first-cousin was for many years in an asylum, and that *her* maternal uncle had had ten children, of whom five were insane. His mother testified to the great distress which Miss Goodwin's letter had caused him, and to his natural excitability of disposition. The proof of insanity, however, rested almost entirely on the evidence of Dr. Forbes Winslow, who first saw him on the 18th November, three months after the murder. Mr. Baron Martin, in summing up with great care, said that nothing was more vague than insanity, but that "what the law meant by an insane man was a man who acted under delusions, and supposed a state of things to exist which did not exist, and acted thereupon. A man who did so was under a delusion, and a person so labouring was insane. . . . . The question is, whether the prisoner was labouring under that species of insanity which satisfies you that he was quite unaware of the nature, character, and consequences of the act which he was committing; or, in other words, whether he was under the influence of a diseased mind, and was really unconscious at the time he was committing the act that it was a crime." His lordship continued, that the jury must judge of the act by the prisoner's statements, and by what he did at the time. Unless they

were satisfied—and it was for the prisoner to make it out—that he did not know the consequences of his act, or that it was against the law of God and man, and would subject him to punishment, he was guilty of murder.

After an absence of five minutes the jury returned a verdict of *Guilty* of wilful murder; and Mr. Baron Martin, in passing sentence of death, said, "In that verdict I entirely concur."

On the following day (Dec. 13th), Mr. Baron Martin wrote to Sir G. Grey, calling his attention to the evidence of Dr. Winslow and Mr. Gisborne, "who both deposed in the strongest manner that the prisoner is now of diseased mind, and absolutely insane;" but adding, at the same time, "The conviction is in my opinion right." In reply to a communication from the Home Office, asking whether he himself believed Townley to be *now* insane, he said, "I cannot say that I have formed any decided opinion upon the point." (Dec. 18th.)

These letters Sir George Grey forwarded at once to the Commissioners in Lunacy, with the following observations of his own:—

"Sir George Grey is of opinion that the verdict of the jury—in which Mr. Baron Martin, who presided at the trial, concurs, and which appears to Sir George Grey from the evidence to have been right—decides the question as to the sanity of the prisoner at the time when the crime was committed. The only question, therefore, on which any doubt exists, and upon which, in the opinion of the judge, there ought to be further inquiry, is whether the prisoner is now insane."

This inquiry, "recommended by Mr. Baron Martin, whether or not the prisoner is at the present time of unsound mind," the Commissioners were requested to undertake.*

The Commissioners replied, on the 28th December, in a long Report, signed by Messrs. Campbell, Wilkes, and

* "The papers sent herewith comprise two letters from the learned Judge, with Sir George Grey's reply to the former of them; the notes of evidence taken at the trial, including the evidence of Dr. Forbes Winslow and Dr. Gisborne; and a series of applications from various persons to whom the prisoner is known, and who are able to speak as to the state of his mind before or since the commission of the murder."—*Mr. Waddington's Letter to the Commissioners in Lunacy, Whitehall, Dec. 23.*

Forster. It was impossible, they said, to separate the consideration of what Townley's condition had been during the entire period of his confinement from their opinion of his present state, and added, that what it is now it has been throughout.

"Being of opinion, therefore" (they conclude), "that the prisoner continues to be now in the same mental state as when he committed the murder and underwent his trial, we think that, applying the law as laid down by Mr. Baron Martin to this case, the prisoner, George Victor Townley, was justly convicted."

Having thus answered Sir George Grey's inquiry, they proceeded to say that, "in view of the extravagant opinions deliberately professed by him, of his extraordinarily perverted moral sense, and of the hereditary taint alleged and apparently proved to have existed in the family of the prisoner's grandmother, we cannot consider him to be of sound mind." They could not find any evidence of the existence of a delusion; although they pressed him very closely as to his alleged belief in a conspiracy, "we could not satisfy ourselves that this was in the nature of a delusion. It seems certain that some members of the deceased's family objected to his engagement with her, while others favoured it, or were indifferent; and that the former had obtained an influence over her, some little time before her letter was written, which was meant finally to put an end to it. Hence he believed that she had been acted upon by a conspiracy, which she meant 'in the tenderest point to injure him;' and all the questions we put upon this part of the case failed to draw from him anything that could bear other construction than that he had taken a disordered and morbid view of an actual occurrence."

Meanwhile Sir George Grey was relieved in an unexpected manner from the difficulty of acting upon a report, in which it was stated that Townley was legally convicted, though of unsound mind; for a certificate was received at the Home Office, signed by three justices of the peace and two medical men (and amended next day in a technical point), under the provisions of the 3 & 4 Vict.

cap. 64, s. 1, stating, in the terms required by law, that they had examined the prisoner, and that he was of unsound mind. Upon these certificates Townley was, in accordance with the construction which has been uniformly placed on that section of the act, ordered to be removed to Bethlehem Hospital—the capital sentence being respited but not commuted.

Immediately there arose a great outcry throughout the land; a miscarriage of justice was attributed to the influence of money; and at the Derbyshire Epiphany Sessions, held on the 5th January, a strong remonstrance was signed by forty magistrates for the county, and sent to Sir George Grey. In this it was stated, with reference to the certificates under the 3 & 4 Vict., that the inquiry had not, like all previous inquiries of the kind, originated with the authorities of the gaol, but had been promoted and conducted entirely as a matter of professional business by Townley's legal adviser; and the necessity of a full and public inquiry by some responsible authority was earnestly urged. Sir George Grey replied that he had no knowledge of any irregularity; reminded the justices that neither Townley's legal adviser, nor the two medical men who signed the certificate, could have been admitted to the prisoner without their sanction; and added that, as far as concerned the step to be taken by the Secretary of State in conformity with the law on the receipt of the certificates, it was immaterial how the inquiry originated, provided the certificates were in accordance with the provisions of the statute.

In a second letter of the 15th January, the Derbyshire magistrates replied to Sir George Grey, that on the application of Townley's solicitor, the visiting justices of the gaol had consented to a preliminary inquiry into the state of the prisoner's mind, for the purpose only of ascertaining whether there was sufficient ground for further and more formal investigation, and *not for the purpose of sending a certificate to supersede that investigation.* They still urged, therefore, that although the certificates might be in accordance with the provisions of the statute, the fact of so important a docu-

ment arresting the course of justice, and substantially transferring the power of life and death from the Crown to two justices and two medical men, put in motion by the prisoner's solicitor, called for an inquiry into the origin and progress of so unusual and startling a proceeding.

At this stage the matter rests for the present. Townley is in Bethlehem Hospital; there is great public dissatisfaction at the way in which a criminal has been withdrawn from legal punishment; an earnest desire is expressed on many sides, that some definite conclusion as to what insanity shall mean may be come to; and all are agreed upon the necessity of abolishing a law, by which the power of reprieving any criminal is placed in the hands of two justices of the peace and two medical men, who may be moved by interest or inspired by a crotchet.*

* Whilst these sheets were going through the press, the following report has been published (*Times*, Feb. 3rd) :—

"Bethlehem Hospital, Jan. 28.

"We, the undersigned, having been requested by Secretary Sir George Grey to examine into the state of mind of George Victor Townley, a prisoner under sentence of death in Bethlehem Hospital, and to report our opinion as to whether he is of unsound mind, report as follows :—

"We have carefully considered the copies of papers supplied to us, and on the 26th and 27th days of this month we have had two lengthened interviews with the prisoner, and the conclusion at which we have unanimously arrived is that George Victor Townley is of sound mind.

"The demeanour of the prisoner during each interview was calm and self-possessed, with the exception that at the commencement of the second interview he displayed and expressed annoyance at the repeated examinations to which he was being subjected. Neither in mode of speech nor in look and conduct was there any sign of insanity observable in him.

"His prompt apprehension of the purport of our questions, and the manner in which he replied to them, indicated the possession of good intellectual capacity.

"The opinions which he avows that men, as the creatures of circumstance, are not justly responsible for their actions, are opinions at which he appears to have arrived by ordinary processes of reasoning.

"That he knows that he is responsible for the commission of crime is made clear by his own words used to us,—'I expected to be hanged because I killed her, and am not such a fool as not to know that the law hangs for murder. I did not think of it at the time, or I should not have done it.'

"We think that his statement that he killed Miss Goodwin to repossess himself of her as his property was an afterthought adopted to justify his crime. He acknowledged to us that he had come to this opinion after the deed was done.

"The supposition that he killed Miss Goodwin under the influence of the

II. The Medical Evidence of Insanity.

On the 18th November, three months after the murder, Dr. Winslow examined the prisoner Townley for nearly two hours, in the presence of Mr. Sims, the governor of the gaol; and again on the 10th December, the day before the trial, he examined him for three-quarters of an hour. "He

opinion that in so doing he was repossessing himself of her as his property is inconsistent with his own repeated statement to us that, without forethought of any kind, he killed her under the influence of sudden impulse.

"He explained to us that by killing Miss Goodwin to repossess himself of her as his property, he simply meant that he took her out of the hands of his enemies, and placed her in a position where she would wait, and where he would rejoin her when he died.

"The prisoner endeavoured to represent the catastrophe to us as due to the influence of sudden impulse, but the details which we elicited from him show that he used threats of murder for some time before he struck the first blow. We think that his clear memory of the events attending the crime, and also the attempts which he has made to misrepresent the state of his mind and memory at the time of these events, are evidence of his sanity.

"We are of opinion that he does not entertain any delusion on the subject of a conspiracy against him, but that he uses the term conspiracy to express the real opposition which he has met with from the members of Miss Goodwin's family to his engagement with her, and also to express the feeling that they are hostile to him.

"We have considered the evidence of hereditary predisposition to insanity given in the papers supplied to us, and our opinion of the prisoner's state of mind has not been altered thereby.

"We examined the apothecary and also the chief attendant of Bethlehem as to the conduct of Townley since he has been in detention at the hospital—both of them have had him under daily and special observation—and they assure us that neither in conduct, manner, or conversation had they been able to observe in him any of the peculiarities which they are in the habit of remarking among the insane.

"W. CHARLES HOOD, M.D., Visitor of Chancery Lunatics.
"JOHN CHARLES BUCKNILL, M.D., Visitor of Chancery Lunatics.
"JOHN MEYER, M.D., Medical Superintendent of the Criminal Lunatic Asylum.
"W. HELPS, M.D., Medical Superintendent of the Royal Bethlehem Hospital."

Looking on this report as conclusive that Townley is of sound mind, and a certificate having been received by him to that effect, Sir George Grey has informed the Derbyshire magistrates that Townley's sentence had been commuted to penal servitude for life, and that the prisoner will be dealt with accordingly. Sir G. Grey adds, that it is the intention of the Government to propose an amendment of the Act under which the certificates of insanity in this case were given.

We rejoice at this result, not only because it fully justifies the views taken in these pages—views which, if regard were had to scientific accuracy, it was im-

was not aware," said Dr. Winslow, "of my name or of the object of my visit. His behaviour was quite natural and not assumed."* Both at the trial and in subsequent letters to *The Times* and the different medical papers, Dr. Winslow desired to guard himself against the expression of any speculative opinion as to Townley's insanity on the 21st August, the day of the murder. "I deposed only," he writes, "to what I myself observed of his mental state when I examined the prisoner on the 18th November and the 10th December. On both those occasions I, in common with Mr. Gisborne, surgeon of the prison, and Mr. Sims the governor, found him insane."† As, however, both these gentlemen testified, that on those dates Townley's state of mind was exactly as on admission into the goal, the scientific evidence, in so far as it expressed the true state of things, necessarily was equally applicable to the 21st August. The Commissioners have insisted upon this fact in their Report.

The results of Dr. Winslow's examinations were as follow:—

"He repeated to me that he did not recognise he had committed any crime at all—neither did he feel any degree of pain, regret, contrition, or remorse for what he had done,

possible to avoid—but because "the appointment of medical gentlemen of great experience in mental diseases" to examine into Townley's state of mind, is an admission of the principle that special experience is required "in order to form a conclusion whether a man is a lunatic or not," and establishes a precedent which we hope may be followed for the future.

* Did Dr. Winslow imagine that Townley mistook him for an itinerant preacher of the Gospel, who, with benevolent design, was making this minute examination into the state of his thoughts and feelings? Or did he, with still more confiding simplicity, think that so skilful and energetic a tactician as Mr. Leech proved himself, had failed to give his client any kind of notice of the interview with his "expert"?

† In the certificates of the three Derby borough justices and the two medical men, Mr. Sims is likewise made to concur with Dr. Winslow and Mr. Gisborne. "The governor of the gaol," it is there said, "deposed to the fact of the prisoner being insane at that period." (Dec. 11th.) On the 13th January, Mr. Sims, in a letter to *The Times*, calls this an important error. "I never was at the trial asked," he writes, "by counsel whether I considered the prisoner sane or not. Immediately after counsel had elicited an opinion of insanity from Dr. Winslow and Mr. Gisborne, I was asked whether I considered the prisoner in the same state then as he was when he came into the gaol; my answer was in the affirmative—not that I meant to imply that I considered him insane, *for I have never done so.*"

I endeavoured to impress on his mind on my first visit the serious nature of the crime he had committed. He repudiated the idea of its being a crime either against God or man, and, in reply to some observation of mine, attempted to justify the act, alleging that he considered Miss Goodwin as his own property; that she had been illegally wrested from him by an act of violence; that he viewed her in the light of his wife who had committed an act of adultery; and that he had as perfect a right to deal with her life as he had with any other description of property, as the money in his pocket, &c. I endeavoured to prove to him the gross absurdity of his statement and the enormity of his offence, and he replied: 'Nothing short of a miracle can alter my opinions.'"

"The expression that Miss Goodwin was his property was frequently repeated: he killed her to recover and repossess himself of property which had been stolen from him. I could not disturb this, as I thought, very insane idea. I said: 'Suppose any one robbed you of a picture, what course would you take to recover it?' He said he would demand its restitution, and if it were not granted, he would take the person's life without compunction. I remarked that he had no right to take the law into his own hands; he should have recourse to legal measures to obtain restitution. He remarked that he recognised the right of no man to sit in judgment upon him. He was a free agent, and as he did not bring himself into the world by any action of his own, he had perfect liberty to think and act as he pleased, irrespective of any one else. I regard these expressions as the evidence of a diseased intellect."

"Last evening he said that he had been for some weeks previously to the 21st of August under the influence of a conspiracy. There were six conspirators plotting against him with a view to destroy him, with a chief conspirator at their head. This conspiracy was still going on while he was in prison, and he had no doubt that if he was at liberty, they would continue their operations against him, and in order to escape their evil purposes he would have to leave the country. He became much excited, and assumed

a wild, maniacal aspect. I am satisfied that aspect was not simulated. I could not get from him the names of the conspirators."

On cross-examination, Dr. Winslow added that he should class the case "as one of general derangement;" that Townley did "not appear to have a sane opinion on a moral point;" that "his moral sense was more vitiated than I ever saw that of any other human being;" that he "seemed incapable of reasoning correctly on any moral subject;" and that he "was beyond atheism."

On considering the tenor of the evidence, then, it appears that Dr. Winslow founded his opinion of Townley's madness —first, on the existence of a delusion as to conspiracy; secondly, on the extravagant notions which the prisoner is said to have had with regard to Miss Goodwin being his property; and, thirdly, on the great perversion of his moral sense. The Report of the Commissioners, however, proves satisfactorily that the so-called delusion as to a conspiracy was a natural belief which was justified by the facts. So serious a misinterpretation of a simple fact must needs weaken the force of the second count; the ideas so extravagantly expressed with regard to property may have a more natural interpretation than the downright imbecility which, as interpreted by Dr. Winslow, they would indicate. To argue that the woman who deceives you must die is not evidence of intellectual disorder, however much it may mark moral deficiency; it is simply the argument which the Sultan employs when he sends the erring inmate of his harem on her last sail on the Bosphorus. The charge of founding his diagnosis of insanity on the perversion of the moral sense, Dr. Winslow himself repudiated in a letter to *The Times*. "I said that his moral sense was extremely vitiated," he writes; "but it is not the fact that I, when in the witness-box, inferred George Townley to be insane and legally irresponsible from such a condition of perverted thought." It would appear, then, that this physician based a positive and extreme opinion of Townley's insanity mainly on that which was an error of his own—on the mistaking of a true belief for a delusion. Still it is possible that he may

have come to a right conclusion on erroneous ground, that his instincts may have led him right when his analytical observation failed; and into this probability we shall presently examine further.

The evidence of Dr. Winslow was supported by that of Mr. Gisborne, the surgeon of the gaol, who at the trial declared his belief that Townley was of unsound mind. This testimony surprised the visiting justices of the gaol; and Mr. Mundy, M.P., complained at the Derbyshire Sessions that they had not been informed by the surgeon when he changed his mind on the subject of Townley's sanity, seeing that he had previously recorded "his opinion that he was perfectly sane." To this censure Mr. Gisborne replied in a curious, rambling letter, in which he acknowledged that, after having had Townley under observation from the 24th August, he made the following entry in the "Prison Journal" on Oct. 6th:

"Townley, aperient pills; good health, mind and body."

He went on to say that although impressed, as the public were, that the prisoner was sound in mind and body, yet the "monstrous notions" of the latter sorely perplexed him: "Sometimes I thought he was sane; again I thought he was insane." A consultation with Dr. Hitchman left him convinced of the prisoner's legal sanity, and certain that an intelligent jury would find him guilty; but he afterwards read Dr. Winslow's Report that "Townley's delusions and statements emanated from organic brain mischief—that he was insane," and thereupon "through the portals of doubt" did this new light guide him to the conclusion that Townley was of unsound mind.* Still, however, he wavered: "Almost till going into the witness-box, I was undecided as to the opinion I should give. . . . I told Mr. Leech I should be guided much by what transpired in court."† It is plain

* "In short," said the judge, interposing, "Dr. Wycherley took the very thing for granted which it was his duty to ascertain; and you, sir, not to be behind Dr. Wycherley, took the thing for granted at second hand."—*Hard Cash*, a matter-of-fact Romance, by Charles Reade.

† A letter appeared in the *Derby Mercury* for Jan. 20th, from the Honourable and Rev. Frederick Curzon, J.P., reminding Mr. Gisborne of a conversation

that this gentleman was in the unhappy position of having a task imposed upon him to which he was unequal, and that he simply drifted into the result of his vacillations, such as it was. His evidence manifestly damages rather than supports the cause of Townley's insanity; but it may be justly dismissed from consideration as valueless on either side of the question.

It was in reality, then, entirely on Dr. Winslow's evidence that the theory of the prisoner's insanity rested. That evidence has since been invalidated to a serious extent by the proved misinterpretation on his part of a true belief, and by the statement of Mr. Sims that he never believed Townley insane, as Dr. Winslow understood him to have done. There is further this negative evidence against that physician's theory—that although he discovered "general derangement," "delusion," "incapability of reasoning on any moral subject, and an inability to appreciate the absurdest of ideas," yet Dr. Hitchman, an eminent psychologist, and a conscientious man, was unable after careful examination to find insanity in the prisoner.

III. The Plea of Partial Insanity; was it Substantiated in Townley's Case?

No one, however credulous he might be, or however subtle he might deem himself as a psychologist, would venture to declare that Townley was afflicted with a general frenzy, either at the time when he murdered Miss Goodwin or when he was tried for the murder. That he was conscious of the act which he had committed; that he was even capable of reasoning calmly, if perversely, about it; and that he was alive to the serious position in which it had placed him, must be sufficiently plain to everyone. "His views of right and wrong, false as they are," the Commissioners say, "appear to have been coherently acted upon, and with a full

which he had with him in November, in which, in reply to the question, "As you have many opportunities of seeing Townley, will you tell me, is he sane or insane?" Mr. Gisborne said, "Townley is as sane as you or I;" and added, "He will be hung to a certainty!"

sense of what they involved." If Townley was insane, it was from some form of partial insanity that he suffered. What, then, are the categories of partial insanity to any of which it may be thought possible to refer the alleged madness of Townley? These are:—

1. *Monomania, or Partial Intellectual Insanity* (*Monomanie Intellectuelle* of Esquirol), in which there is a delusion upon one subject, or the delusions are confined to a certain circle of ideas, apart from which partial eclipse the mind is thought to be sound.

2. *Moral Insanity* (*Monomanie Raisonnante* of Esquirol), in which the character, feelings, and affections are changed, while there is seemingly no intellectual derangement.

3. *Impulsive or Instinctive Insanity* (*Monomanie Affective* of Esquirol, *Manie sans Délire* of Pinel), in which there is a violent, perhaps an irresistible, impulse to commit a crime with a full consciousness of its nature and even horror of it—the intellect seeming unaffected.

The currency which these names have obtained necessitates the present use of them, ill-chosen and objectionable as they unquestionably are.

1. *Monomania, or Partial Intellectual Insanity.*—That a person may exhibit insanity only on one or two points, apart from which the operations of his mind are vigorous and healthy, is a well-received article of popular faith. It is not by any means a certain article of a true scientific faith; for in most of these cases it is evident, on sufficiently careful observation, that the mind is not unaffected outside the circle of recognised morbid ideas—that in reality there are discoverable such a change in the character and habits, such perversion of the feelings, such an excitability of disposition, with loss of self-control, as to constitute a general disturbance apart from the particular delusion. The latter is an evident symptom, which anyone who runs may recognise; but the general disorder—which is, in fact, a moral insanity—requires for its discovery the careful examination of some one who has known the individual or who knows the disease. And yet it is of a serious nature; for it is exactly that state

of mind in which there is the disposition to violent excitement, with a power of will greatly diminished, in which there is the danger of unaccountable impulses suddenly springing up at any time. Anyone, therefore, afflicted with partial insanity is not safe; he may not only at any moment become the evident victim of his false idea, but he may be hurried into sudden violence by some new and dangerous impulse, which appears to have no relation to the delusion, but which is an expression of the disease of which it is a symptom. Partial insanity does, therefore, take away from the sufferer some, if not all, responsibility for his criminal actions, whether these are plainly related to his delusions or not. The law recognises this in civil cases, where it makes void every act of the lunatic done during the period of lunacy, however limited his delusions, and even when the act can in no way be connected with the influence of them. But it is not so in criminal cases: in them the connection between the delusion and the act must be shown; and thus the law truly merits the reproach of being more careful about the mental state when property is concerned than when life is at stake. And what is it which the law really demands? That the sane and logical mind should dive into the dark wasteful depths of the lunatic's soul, and follow the incoherencies of his wild and wayward thoughts. And if the sound mind should fail in tracing out a connection where no path is, then the lunatic is to be sacrificed to the vengeance of the law which not he, but his disease, has outraged.* Surely it is a manifest absurdity to impose on any sane man the task of tracing out a connection between mental phenomena the essential character of which is that they are not coherent—that they follow one another in no logical relation—that not the order, but the disorder of their occurrence is utterly opposed to all the experience of sanity! The delu-

* "Was't Hamlet wronged Laertes? Never, Hamlet!
If Hamlet from himself be ta'en away,
And when he's not himself does wrong Laertes,
Then Hamlet does it not; Hamlet denies it.
Who does it then?—His madness. If't be so,
Hamlet is of the faction that is wronged:
His madness is poor Hamlet's enemy."

sion is not itself the disease, but a symptom of the disease; and it is as certain as observation can make it, that the criminal act may be a manifestation of the disease of which the delusion is a manifestation, without any connection between them being evident to the looker-on.

The homicidal acts done by those insane who suffer from partial intellectual insanity fall naturally into three divisions:—

(*a.*) When the act is done directly in consequence of a delusion. It may be a voice from Heaven which commands the deed, and the law would then hold the sufferer guiltless. It may be that he kills some one under the delusion that his life is in danger from him; then also the law would hold him irresponsible. But if under the delusion that he is the victim of a cruel and persistent persecution the madman shoots his supposed enemy, then he is hanged: had this fancied enemy been his natural heir, whom he disinherited under the influence of his delusion, then the law would have voided the will. The truth meanwhile is, that when a positive delusion exists in the mind, the rest of the mind is so far affected that unaccountable impulses spring up without being dictated by the delusion, and impulses which are in relation with the delusion acquire an irresistible force. The impossibility which the law assumes in this matter is that the passion in the insane mind should be as much under control as the passion in the sound mind—in other words, that insanity should be sanity.

(*b.*) Where the act is done indirectly in consequence of the delusion, but the connection cannot be seen by the sound mind, although the lunatic himself may disclose it. A young gentleman, for example, committed a frightful assault upon a child, cutting the calves of its legs through to the bone. As this person's morbid fancy was that he was in love with windmills, there was no connection apparent between his delusion and the act. And yet the truth was that he had been placed by his friends in a part of the country where there were no windmills, and he committed the assault in order that he might be removed to some place where there were windmills. Those who think that the

mind is unaffected apart from the delusion might do well to reflect upon the logic of such a manner of reasoning.

(*c*.) Where no relation between the delusion and the act can be recognised by the looker-on, or made known by the lunatic, however willing the latter might be to exhibit it. A mother of two children fancies that she is persecuted, and is suicidal, but goes about her daily duties with regularity. One day, without seeming anywise different from usual, she took one of her children and beat its head against the floor till it died; and she would have done the same with the other child had she not been prevented. She was sent to an asylum, where after a time she quite recovered; but she never could tell how it was that she had killed her child, when she was so fond of it. In such case the frightful impulse is as little within the control of the will as an attack of epilepsy, to which, indeed, it is strictly comparable.

Are there any valid grounds, then, on which to base an inference that Townley suffered from partial intellectual disorder? It was certainly said in medical evidence that he had a delusion as to the existence of a conspiracy against him, consisting of six persons with a chief at their head. With a prudent wisdom, the prisoner, it appears, spoke only in general terms of this conspiracy, and would not give the names of the conspirators. On the face of it such a delusion had an exceedingly suspicious look; so vague and general a description of it was not at all consistent with the way in which lunatics talk about their delusions, if they talk of them at all. It is marvellous that the examining physician did not suspect, what the Commissioners at once discovered, that this idea of a conspiracy was anything but a mad notion. Certain of the friends of Miss Goodwin, solicitous of her welfare, were anxious that she should get rid of what all must admit to have been a long and objectionable engagement, and they doubtless did their best to bring that desirable result about. So far Townley was the victim of a conspiracy; and so far from the belief in it being evidence of insanity, he must verily have been all but an idiot if, under the circumstances, he had not suspected

these hostile influences. He did believe in them: and although he may have taken an exaggerated view of an actual occurrence, that belief was the sum and substance of the delusion alleged. By a singular fitness however, owing to what Townley prudently said and more prudently did not say, the medical evidence at the trial went exactly as far as was necessary to establish the belief in a conspiracy, and stopped exactly at that point where it was necessary it should stop to prevent the bubble being burst. Unlike real lunatics, who are mostly very angry at being considered insane, Townley seems to have exhibited himself in the most obliging manner exactly as far as was advisable for his own case that he should do so. Even if it be thought that he was simulating, it must be allowed that there was a certain sincerity in him; for although he did not speak the whole truth, he did not volunteer a falsehood, but assumed a wild maniacal aspect after he had said all that it was prudent to say. When we follow the statements further made with regard to this supposed delusion, they are likewise strange and suspicious. Townley expressed a belief that if he were at liberty the conspirators would continue their operations against him, and he would be obliged to leave the country. Now, it is certain that Townley was not the dupe of his own so-called delusion—certain that he knew what the Commissioners tell us was the nature of it: put this fact then by the side of his statement, that he would have to leave the country, together with the indefinite description of the conspiracy, and then let it be said whether it is not difficult to avoid some suspicion that Townley was deliberately deceiving Dr. Winslow. Be that as it may, however, it is unfortunately the fact that Dr. Winslow was deceived as to the real import of that on which he mainly based his opinion—that his superstructure of general derangement was raised on an extremely rotten and unstable foundation.

It is a rule of evidence, the justice of which there is no gainsaying, that the whole of the evidence of a witness whose testimony is discredited on one important point is more or less invalidated. This rule must be especially applicable to the evidence of the "expert." If one skilled in handwriting

swore positively at a trial that a certain word was in the handwriting of A or B, and it was proved that the word was not in the handwriting of A or B, the jury would rightly place little confidence in the rest of his evidence. It is to be regretted, therefore, that the unreliable evidence, so positively given, of a delusion which never existed, does seriously invalidate the rest of the medical evidence of Townley's insanity. When we are told that he really thought that he regained possession of Miss Goodwin by killing her, it is plain that, if this statement is literally accepted, we must believe Townley to be intellectually incoherent, if not imbecile, which all the evidence proves he was not. We cannot but suspect here an exaggerated misinterpretation of an actual expression, similar to that by which a delusion of insanity was detected in a simple true belief; and we cannot but think that Townley did not believe that he recovered bodily possession of his betrothed by stabbing her, but that it was in a less literal sense that he thought he regained possession of his property. Miss Goodwin's affections (herself, as it were) had been stolen from him; by taking from him who had robbed him that which had been stolen, he did, in a certain sense, recover his property, even though it was under the condition of destroying it. Such reasoning may argue moral perversion, but there is no evidence in it of intellectual disorder. And, at any rate, the theory which represents a man who coherently supported and acted upon false notions of morality, and in whom a daily observer and an experienced psychologist, could neither of them detect insanity, unable to appreciate the absurdity of the idea that he would gain repossession of a sovereign by throwing it into the Thames, is utterly inconsistent with the facts of insanity, and would be laughed out of a scientific court. Such theory is itself a scientific incoherency and a psychological curiosity. Though a man be mad, he cannot well combine intellectual dementia with great and coherent intellectual activity.

It is a necessary conclusion, from the analysis of the medical evidence, that George Victor Townley was not afflicted with any form of partial intellectual insanity.

2. *Moral Insanity.*—Much as the assumption of such a variety of insanity has been reprobated, its existence rests with certainty on the general agreement of all writers who have had a practical knowledge of insanity: if the names of those who have testified to its existence were given, the list must embrace all the distinguished writers who have devoted their lives to the study of insanity. Unless, then, it is thought right to discard the special knowledge of those who have so laboured in patient observation of facts, in favour of a popular prejudice, it is full time to recognise the truth, however inconvenient it may seem. Without illusion, hallucination, or delusion, it is certain that a disorder of mind exists, the symptoms of which are exhibited in a perverted state of those mental faculties which are usually called the active and moral powers—the feelings, affections, propensities, temper, habits, and conduct. Still, though in such case the individual may reason very acutely—may excuse, or explain, or justify his insane acts, and seems in full possession of his intellectual powers, these latter are really affected indirectly through the morbid state of the feelings; all his reasoning is tainted with the morbid self. He may judge very correctly of the relations of external objects and events to one another, but no sooner is self concerned than he displays in his reasoning the influence of his morbid feelings; he cannot realize truly his relations; his whole manner of thinking is a delusion—a lie. And the lie is of the worst kind; for it is not absolutely false, like a delusion mostly is, but it contains some truth hopelessly perverted. It is difficult sometimes for a looker-on, impressed with the acuteness of their selfish reasoning, and offended by their vices or perverse actions, to avoid thinking that these people could help their follies if they liked; but whosoever has sufficient practical knowledge of insanity knows that they are sufferers from disease, and that their follies or vicious acts are as little within their control as the irregular and purposeless movements of one who is afflicted with a chorea.

It is certainly natural that the doctrine of moral insanity should be looked on with extreme disgust; for it is startling enough at first sight, and it has undoubtedly been

greatly abused. By self-sufficient ignorance, or bold and unscrupulous advocacy, the plea founded on it has been made a subterfuge for the criminal to escape punishment. Dr. Prichard, who was the author of the term, never imagined that the vicious act or crime would of itself be considered proof of moral insanity. It is not sufficient merely to state an opinion; in the previous history there must be some evidence of disease from which the crime can be logically deduced, as the acts of the sane man are deduced from his motives, in order to establish moral insanity. "There is often," says Dr. Prichard, "a strong hereditary tendency to insanity; the individual has previously suffered from an attack of madness of a decided character; there has been some great moral shock, as a loss of fortune; or there has been some severe physical shock, as an attack of paralysis or epilepsy, or some febrile or inflammatory disorder, *which has produced a perceptible change in the habitual state of the constitution. In all cases there has been an alteration in the temper and habits.*" The recognition of moral insanity is, then, a medical diagnosis of a difficult nature, in which the crime is to be traced from disease as its cause, through a careful appreciation of various symptoms, physical and mental.

There is something inconsistent, after all, in the unwillingness which there is to acknowledge moral insanity. Almost every case of insanity really begins in emotional disturbance; and moral disorder may precede for some time intellectual disorder, and itself constitute the disease. Furthermore, so constantly does moral insanity accompany intellectual insanity, that Esquirol declared "*moral alienation*," and not delusion, "*to be the proper characteristic of mental derangement.*"

It is found, on sufficiently accurate investigation, that in the majority of cases where moral insanity exists the cause of disease is hereditary taint. When such a taint does exist it undoubtedly represents a positive defect in the constitution of nervous element, and predisposes, therefore, to any of those forms of nervous disease in which the degeneration of nerve element may display itself. When,

at the trial of the unhappy youth Burton, whose mother and brother were insane, the Judge laid it down that "Hadfield's case differed from the present, for there wounds on the head had been received which were found to have injured the brain," the exhibition was not an instructive one; for a judge ought to have known that a strong hereditary predisposition to insanity is often as injurious to the brain as blows upon the head are. In reality, the hereditary predisposition to insanity implies an innate disposition in the individual to act out of harmony with his relations as a social being: the acquired irregularity of the parent has become the natural infirmity of the offspring, as the acquired habit of the parent animal sometimes becomes the instinct of the offspring. Hence comes the impulsive or instinctive character of the phenomena which mark hereditary insanity; the actions are frequently sudden, unaccountable, and seemingly quite motiveless. Appeal to his consciousness, and the individual will reason with great intelligence, and seem nowise deranged; but leave him to his own devices, or place him under conditions of excitement, and his unconscious life appears to get the mastery, and to drive him to extravagant, dangerous, and immoral acts. What is more unnatural than for a child six or seven years old to commit suicide, or to manifest dreadful propensities to cruelty, or even to homicide! And yet many cases are on record in which children suffering from moral insanity through hereditary taint have exhibited such desperate tendencies. The undoubted existence of such examples in children in whom no delusion exists, where no motive can be traced and no responsibility can be assumed, might well make the boldest pause before he denies the possibility of such a disease in adults because he cannot trace a motive, or thinks he detects a wicked one. By his acts, as well as by words, does man express himself; and it is in insanity of action, rather than of thought, that hereditary madness declares itself.

It admits of no question in science that homicidal and like desperate acts are committed by those afflicted with moral insanity without any delusion being present in the

diseased mind. Besides acts of eccentricity and immorality, and the homicide which a father or mother commits for the purpose of sending a child to heaven, it is to this class that those instances belong in which lunatics commit murder merely from a morbid desire of being hanged. That is one well-recognised way in which hereditary madness displays itself.* As there is no positive delusion in such cases, but only the morbid desire and the consequent crime appear, the unfortunate sufferers are very liable to be hanged, and those who give evidence in their favour to get into difficulties. Thus, in the painful case of the youth Burton, tried before the late Mr. Justice Wightman at Maidstone, counsel put to a medical witness this question—"Suppose a man with a desire to be hanged, and committing homicide with that object, would that be a mark of insanity?" The witness replied that no doubt such a man must be under a delusion. The Judge thereupon asked, "What delusion?" The witness was perplexed and could not clearly define, but supposed there must be many conceptions; doubtless he felt how impossible it was for him to dive, as Lord Denman expressed it, into the mind of a being so madly irrational. In summing up, the Judge said: "He was supposed to desire to be hanged, and in order to attain the object committed murder. That might show a morbid state of mind, but not delusion." Certainly not delusion, unless a delusion that it was a pleasant thing to be hanged; but delusion is not proof of insanity, and insanity may exist without delusion. And if definite ideas are put beneath words used, it will appear that a morbid state of mind really means a diseased state of mind, and that a diseased state of mind is insanity, which is exactly the condition of things in unfortunate beings like Burton. There is no possibility of explaining on psychological principles how it is that anyone commits murder for the sake of being

* At the trial of Burton, Mr. Joy, the surgeon of the gaol, said that in his opinion the prisoner was perfectly sane. Asked whether it could be a mark of insanity to commit homicide from a desire to be hanged, he replied that he thought it would, "*but he had never heard or read of any case of that kind, except that of McNaughten.*" Mr. Joy had not taken the trouble to open a textbook of "Medical Jurisprudence" before daring to give evidence upon a matter of which he was perfectly ignorant.

hanged, and it is not to be wondered at that lawyers will not believe in the existence of that condition, the peculiarity of which is that it seems to them inexplicable; but what the lawyers and the public should try to realize is that insanity is a bodily disease, and as a disease must be examined, and that such phenomena as Burton exhibited are explicable on pathological principles. The morbid feeling or impulse driving an unwilling mortal on to a desperate deed is really no more wonderful than the convulsion of a limb, which the sufferer cannot prevent. And it may perhaps be allowed, on psychological grounds, that there is not—what Mr. Justice Wightman seemed to fancy there was in Burton's case—any particular gratification in being hanged, such as might render homicide for the attainment of that end a tempting and a pleasant vice. Society scarcely needed to be frightened by a terrible example from yielding to that temptation. On the theory of his sanity there was no adequate motive for Burton's crime; but his act was exactly that kind of desperate, self-centred, motiveless, impulsive deed which those who have a knowledge of insanity know to occur sometimes where madness has been inherited.

We give briefly an account of the crime of Burton, because it illustrates a moral insanity in which the crime was logically traceable to disease, and in that regard, as in other respects, affords a striking contrast to the case of Townley. Burton, the depraved "young man of twenty," as he was called, was a youth of eighteen; his mother had been twice in a lunatic asylum, was desponding, and had attempted suicide; his brother was of weak intellect, silly and peculiar. The person to whom he had been apprenticed and others gave evidence that he was always strange, and not like other boys; he "had a very vacant look, and when told to do anything, would often run about looking up to the sky as if he were a maniac," so that the indentures had to be cancelled. "The case was very simple, but very shocking." The prisoner said that he had felt "an impulse to kill some one;" that he had sharpened his knife for the purpose, and went out to find somebody on whom he should use it; that he followed a boy, who was the first person he saw, to a

convenient place; there he knocked him down, stuck him in the neck and throat, knelt upon his belly, grasped him by the neck and squeezed till the blood came from his nose and mouth, then trampled upon his face and neck until he was dead. He then washed his hands, and went quietly to a job which he had obtained. He knew the boy whom he had murdered, and had no ill-feeling against him, "only I had made up my mind to murder somebody;" he wished to be hanged. His counsel argued that this vehement desire to be hanged was the strongest proof of insanity; the counsel for the prosecution urged that the fact of the prisoner committing the murder to be hanged showed that he knew the consequences of his act, and that to say he was insane was to confound depravity with insanity. He was found guilty; and Mr. Justice Wightman, in passing sentence, informed him that he had been "guilty of a more barbarous and inhuman murder than any which has come under my cognizance during a judicial experience of upwards of twenty years." Indeed, the murder was so cruel, that in the tenderness of his heart the Judge "could not trust himself to dwell upon its shocking details." When sentence had been passed, the prisoner said, with a smile, "Thank you, my lord," and went "down the dock, followed by an audible murmur and almost a cry of horror from a densely-crowded audience." That cry was, perhaps, an unconscious testimony that the theory of moral depravity did not quite suffice to explain Burton's case. His hereditary antecedents, his previous history, the motive with which he committed the murder, the desperate way in which the act was done, his conduct immediately after the murder, the readiness with which he told all about it, and his behaviour during the trial and after the sentence,—all pointed, as definitely as circumstances could point, to insanity and not depravity. There was no need to found a diagnosis of insanity on the crime itself, peculiar as was its character, nor even on the strange motive of it, morbid as that was; by a chain of circumstances the course of the hereditary disease downwards to its desperate evolution was logically marked out. However, Burton was hanged; while Townley, in whose case no at-

tempt was made to connect the crime with a disease as cause, was sent to a lunatic asylum.

With the foregoing principles for our guidance, is it possible to refer the supposed madness of Townley to the category of moral insanity? When we learn that he did not acknowledge that he had committed any crime, but justified his act, that he looked on Miss Goodwin as his property, that he considered he had a perfect liberty to think and act as he pleased, and that he recognised the right of no one to sit in judgment upon him—it might at first sight seem that such sentiments must indicate moral insanity. But what evidence was there, *before the crime,* of the disease of which the murder might be regarded as the effect? Townley had always been treated as a perfectly sane man by his relatives and friends; they had made no objection to his engagement with Miss Goodwin, but had even recommended him to go and see her when it was broken off; and the utmost that could be said in favour of hereditary insanity was, that he had not a good head for business, that a grand-aunt had committed suicide, and some more distant relatives had been insane.* No lineal ancestor of the prisoner was said to have been insane, and it did not appear that any of the present generation of the family in any of its collateral branches were thus afflicted. So remote a hereditary taint, in the absence of all symptoms of disease previous to the crime, will certainly not justify us in deducing the latter from it as a cause of disease; to acknowledge that hereditary taint is sufficiently proved in any one who commits a crime, merely because of its existence in some remote ancestor, would be the assumption of so large a license as to make science justly merit the reproach of wilfully confounding depravity with insanity. In the history of Townley, previous to the crime, there is no positive evidence of insanity offered,

* In a letter to the *Manchester Guardian,* the Rev. W. Wild, who was "personally acquainted with the former private life and temperament of G. Townley," and who had laboured to get a commutation of the sentence, says that he "never indulged the notion of insanity, strictly speaking, as causing the fatal deed," and believes a more satisfactory line of defence might have been adopted.

urgently desirable as such evidence was, and strained, as we may well think, events would be to favour that supposition.

In the circumstances under which the crime was committed, and in the manner of its perpetration, there is nothing to indicate insanity, but, on the contrary, the amplest evidence of a mind deliberate and self-possessed. Mr. Harris testified to the cool and collected manner of Townley immediately before the murder; and the way in which he acted immediately after it, giving up letters to Captain Goodwin so that they might not be brought into court, shows that he had his wits sufficiently about him then. From the circumstances of the crime, nothing can be extracted to justify the belief that a mind sound up to this point, had suddenly lost its balance, and become desperately insane. In spite of this, however, it will be assumed by some, that the great disappointment which he had met with, and the suffering which he had undergone in consequence, had made him mad. No doubt he suffered much; men of his selfish type do; but is it logical to accept disappointment and suffering as having produced insanity in the absence of evidence of insanity? Apart from that consideration, however, it may be very positively asserted that the kind of insanity from which Townley is represented as afterwards suffering, could not be suddenly produced by a moral shock. *Nemo repente fuit turpissimus*, is as true of moral insanity as of moral depravity. And as the state of mind testified to by Dr. Winslow on the 18th November was that which the prisoner exhibited on admission into Derby Gaol immediately after the murder, it is evident that if he was insane, he must have been insane before the disappointment. As we have already seen, there was not the slightest evidence that he was, but strong evidence that he was not.

Failing, then, to discover any direct signs of disease incapacitating Townley from the control of himself either before, or at the time of the murder, let it be added by way of positive evidence against insanity, that if ever jealousy or revenge, if ever evil passion of any kind, can be the cause

of murder by a person of sonnd mind, all the eircumstanecs of Townley's erime claim the acknowledgment of snch passion in his case. "She has deceived me, and the woman that deceives me must die. I told her I would kill her. She knew my temper." Not mueh evidence in this genuine ontburst of satisfied revenge, in this real utteranee of a badly-constituted natnre, of that deliberate desire to re-possess himsclf of property which on consideration developed itself. Certainly it must be diffieult for the most innoeent simplicity to avoid a suspieion that the claborate and perversc rcasoning did not dictate the crime, bnt was afterwards made the justifieation of a self-fecling and vain mortal, who had put himself in hopeless antagonism with the world, and subjeeted himself to the hnmiliation of legal punishment.

In the mental state of Townley, as it was deseribed after the crime, can we rceognise the proofs of disease? On the supposition of insanity we shall have to admit that an individnal who had never shown any symptoms of insanity, who eommitted a erime from motives and under eircumstanees similar to those under whieh many sueh crimes have been eommitted by persons never suspected to be insane, did nevertheless suddenly fall into the extremest degree of moral insanity. "His moral sense was more vitiated than I ever saw that of any other hnman being," Dr. Winslow said. . . . "He seemed ineapable of reasoning eorreetly on any moral snbject." The crime is assumed to have been the severe symptoms of a disease whieh had never hitherto shown itself; an extreme moral insanity is supposed to have sprnng up, like Jonah's gourd, in a single night. And on what gronnds are we reqnired to admit this miraeulous development? Beeause a man who had eommitted a erime refused to admit that he had done wrong, bnt talked as a neeessitarian or an atheist might; and because a psyehologieal expert, who had put down that whieh was a true belief as a delnsion proving madness, being painfully shoeked by such want of moral sense, thought there must be insanity. It is trne, that Dr. Winslow afterwards wrote a letter to diselaim the idea of having inferred insanity from perverted views on

religious subjects, and to lay stress on the *intellectual* delusions as contradistinguished from the *moral* perversion; but as all delusion disappeared when examined into, the scientific advocates of Townley's madness will probably insist on retaining the moral perversion to rest their theory upon.

If not content to forfeit all pretension to scientific accuracy, we must allow that the theory of moral insanity cannot be applied to excuse Townley's crime; it will not only not explain every circumstance in the case, but it is positively incompatible with certain circumstances. Will not, however, the theory of moral depravity suffice to explain his crime, his perverse utterances and ridiculous philosophy? Is it not possible that a vain, self-indulgent, and ill-regulated mind might, by a course of French novels and gratified passions, be brought to such a pitiable condition as he exhibited? Selfish enough to commit such a crime, such a mind would surely be insensible to remorse, for the only regret which it could feel would be from a disappointment of self. Self-centred in all his feelings and thoughts, his love for another is a pure self-gratification; and if the being whom he has, as it were, thus appropriated to himself in his selfish passion, rejects him for another, it is an unpardonable injury to his personality—it is to rob him of his most dear possession, and if he cannot have that he will have revenge. Self-sufficient in the excess of his vanity, he recognises the right of no one to sit in judgment upon him; he is a free agent, and if he does not find it agreeable to conform to the world, the world must conform to him. But the world is stronger than he is, and being placed by the indulgence of his passions in a position of exceeding humiliation, his self-feeling finds gratification in the defiant expression of a childish and perverse obstinacy. Such exhibition is a last solace to his vanity, as his philosophy exhibits the vanity of his intellect. No doubt there is moral perversion in such a pitiable display, as there is moral weakness in such a character; but the moral perversion is that of the naughty child which the birch-rod marvellously improves. While there are all the positive signs of moral depravity, the evidence of moral insanity is singularly deficient; and it is impossible to refer such a case

to insanity if any distinction between disease and vice is to be maintained. There is wanting all proof of disease rendering the individual unaccountable; and if the doctrine of moral insanity is to gain acceptance, disease must always be proved, not by making assumption support assumption, but by logical appreciation of symptoms.

3. *Impulsive Insanity.*—Nothing has excited a more angry resistance in the legal mind, and been less acceptable to the conservative instincts of the public, than the doctrine that a man may be irresistibly impelled, by reason of disease, to a criminal act which he knows to be wrong, and himself, perhaps, revolts at. "Such a theory was as contrary to common-sense as it undoubtedly was to law," Mr. Justice Wightman said in that case already quoted, in which he lost the dignified impartiality of the judge in the warmth of the interested advocate. And yet all who have given the labour of their lives to the study of insanity, men eminent and men not eminent, English authors and foreign authors, living writers and writers who have passed to their rest, are perfectly agreed upon the existence of such a form of mental disease, and have thus conspired, with a remarkable unanimity, against the common-sense of such as the late Mr. Justice Wightman. Now, a common prejudice which better knowledge would disperse is exceeding apt to be mistaken for common sense; and common sense which gets angry at contradiction, and gets angry on the judge's bench, is not unlikely to be a vulgar prejudice. The theory of impulsive insanity is, no doubt, contrary to the law as laid down by the judges, from whose ill-grounded speculations and crude *dicta* one of the ablest of themselves, Mr. Justice Maule, dissented; but when a judge goes out of his way to pronounce as contrary to common sense a doctrine which all those eminent men who have studied the matter specially, accept, it is not seemly on his part; and any one inclined to such a rashness might do well, for the sake of his calling, to remember that it was once thought contrary to common sense to say that the earth moved round the sun.

There can be no doubt that the term instinctive insanity is badly chosen; it strikes one at once as absurd to say that

there is in man an instinct to commit homicide. In most cases of impulsive insanity it is quite evident that there is present in the mind of the sufferer an *idea* that he must kill some one. He is conscious of the horrible nature of the idea, struggles to escape from it, and is miserable with the fear that it may at any moment prove too strong for his will and hurry him to the deed which he dreads, yet cannot help dwelling upon. It is not right, then, to say, as is often said, that the intellectual powers are quite sound; there is a diseased idea present, and at any moment the whole mind may be brought under the influence of it. So desperate is the fear of yielding to the morbid impulse, so intense the suffering, that a mother afflicted with the impulse to kill her child, has killed herself to prevent a worse consummation. It often happens that the sufferer succeeds in controlling the morbid idea for a time, calls up other ideas to counteract it, warns his victims to get out of the way, or begs to be bound; but at last, from some deterioration of the bodily health, the idea gains a fatal preponderance; the tension of it then becomes excessive; it is no longer an *idea* the relations of which the mind can contemplate, but a violent *impulse* into which the mind is absorbed, and which irresistibly realises itself in action. In physiology it is perfectly well known that an idea may cause action quite independently of volition, and a class of movements are described as *ideomotor* in the text-books of that science. It is in strict correspondence, then, with physiological fact, that in cerebral pathology a variety of disease is recognised in which morbid idea causes morbid action.

The fact that an individual afflicted with an idea rendered predominant by disease can and does sometimes resist and control it, causes many to think, and some to argue, that it might always be resisted successfully. In reality it is a simple question of the degree of morbid action—whether the idea shall be kept in subjection or become uncontrollable. As a chronic disease may become acute, so a morbid idea, which remains in consciousness, may become an impulse which in defiance of the will escapes from consciousness into outward realization. By an act of will a person may prevent

involuntary movement of his limbs when the soles of his feet are tickled, but the strongest will could not prevent spasmodic movements of the limbs if the excitability of the spinal cord is increased by strychnia or by disease. In like manner, a diseased state of these ganglionic nerve-cells, which minister to the manifestation of idea, will produce a morbid idea that may pass into an impulse beyond control of the will. For any one to recommend control of the morbid idea when disease has reached a certain intensity, would be all one as if he should preach moderation to the convulsions of epilepsy. In such case the responsibility is not in relation to consciousness, but in relation to the degree of volitional power as this may be diminished or abolished by disease. And in such case, we may add, that the estimation of the individual's condition is not a simple fact for common sense to decide upon summarily, but a difficult question of medical diagnosis for the physician who has made disease his study. It is because so-called common-sense, arguing from the self-consciousness of a sound mind, has treated the question summarily, that many undoubted lunatics have been hanged—lunatics who, had the halter not cut their disease short, would have proved its existence by sinking into dementia.

Is it possible to bring Townley's crime under the category of impulsive insanity? Certainly not. What has been said with regard to the possibility of general moral insanity might be repeated here. There was no evidence of the existence of such morbid impulse before the act; in the circumstances of the act itself there was the strongest possible evidence against any such impulse; and the subsequent history of the state of mind disproves positively the existence of impulsive insanity. No one with a sufficient practical or proper theoretical knowledge of mental diseases would injure science by attempting to make Townley the victim of impulsive insanity.

Having brought forward the different forms of partial insanity, and shown how impossible it is, with a just appreciation of scientific knowledge, to refer Townley's case to any one of them, the question naturally arises, What form

of insanity, then, did Dr. Winslow attribute it to? That is just the question which it is impossible to answer. Townley's insanity, as described by that psychologist, was a medley, a scientific patchwork, ingeniously constructed, boldly devised, striking in appearance, but really a scientific incoherency—a mixture of incompatibles. "General derangement and diseased intellect," with the ability to pass off a true belief as a delusion, "not a sane opinion on a moral point," "vitiation of moral sense," "inability to appreciate the absurdity of the idea" that by killing Miss Goodwin he would regain possession of her, and the coherent reasoning of a necessarian—these together constitute an extreme form of insanity of some kind, perhaps a new and at present obscure form of disease, which future ages will describe as "intelligent imbecility." How it was that Dr. Hitchman and the governor of the gaol could doubt the existence of insanity in one so very mad passes understanding. One does not know whether to wonder more at the obtuseness of these gentlemen, who could not detect madness where Dr. Winslow discovered it in such extreme degree, or at the marvellous perception of Dr. Winslow who could discover such extremity of insanity where these gentlemen could detect none. Unfortunately, these alleged symptoms of an extreme mental degradation are incompatible with the actions of the cool, self-possessed man who spoke with Mr. Harris as he went on his way to the murder, or of the calm and collected individual who took tea with Captain Goodwin immediately after it: the facts as Townley appears to have exhibited them to Dr. Winslow are in contradiction to the facts as we have them from other sources. It is a pity for the sake of his science that this psychologist had not, instead of rejecting the moral perversion, and appealing to intellectual disorder, rejected the intellectual delusions, and rested the plea of madness on moral deficiency. Then, though the plea might, and no doubt would, have been without avail in the Court where Townley was tried, it would perhaps have rested on a substratum of truth, such as the legal tribunals of the world cannot take notice of: for who shall affirm that Townley's character did not feel in some

measure the effect of the hereditary taint?—who can apportion the amount of his responsibility?* But this principle must ever prevail in science and in law, that, when moral insanity is suspected and pleaded, there cannot rightly be any ground for acquittal on that plea, if the criminal act, as a symptom, cannot be logically connected by a train of other symptoms—such as change of habits, feelings, and character—with disease as its cause.

IV. Antagonism of Law and Medicine on Questions of Insanity.

The result of the deliberations of the judges, on which the law in cases of murder where insanity is pleaded now rests, is that the prisoner is guilty if at the time he committed the act he was aware of the nature and consequences of it,—in other words, was capable of knowing what he did was wrong. Under this dictum it would be necessary to hang nine-tenths of the lunatics in England, in the event of their committing murder. So flagrantly unjust has it occasionally appeared, that since the time when it was put forth after McNaughten's trial, a judge has more than once ruled in direct opposition to it. In the trial of Frost, Mr. Justice Williams said to the jury, "It was not merely for them to consider whether the prisoner knew right from wrong, but *whether he was at the time he committed the offence deranged or not.*" And Lord Campbell said on one occasion in the House of Lords, that he had looked into all the cases that had occurred since 1793, and to the direction of the judges in different cases, "and he must be allowed to say that there was a wide difference, both in meaning and words, in their description of the law." Thus there is not in reality any legal certainty, and it is a matter of accident whether a man is hanged or acquitted on the plea of insanity. McNaughten was acquitted in opposition to the *dictum* of the judges; while Bellingham, who had several delusions to

* We would not overlook the fact that, in the future, insanity may possibly be developed in this man of low moral powers and alleged hereditary taint now subjected to all the horrors of remorse in the solitariness of penal servitude.

which his crime was clearly attributable, was hanged. Fooks, who had delusions as to persecution, was recently hanged at Dorchester; Clark, with similar delusions, was, after being sentenced to death, admitted to be insane. When at the trial of Oxford, the Attorney-General cited the case of Bowler, Mr. Baron Alderson interrupted him with this observation—"Bowler, I believe, was hanged, *and very barbarous it was.*" And yet, at the trial of Pate, Baron Alderson laid it down that a lunatic was responsible for a criminal act if his delusion had not conduced and driven him to the act. The legal net does, in fact, drag into its meshes all but those extremest cases of madness where the frenzy is so patent that they are not likely to come into any court of justice. Not only must all homicidal madmen who suffer from impulsive insanity, and all those who suffer from general moral insanity, be legally responsible, but all those also who suffer from delusion, in whom a connection between, not the disease and the act, but the delusion and the act, is undetected by the looker-on, or the connection is such as would not excuse murder if the delusion were true. Where two symptoms of a disease exist—the delusion and the criminal act—what the law demands is, that one should be proved to be the cause of the other, before it will admit the disease: it insists on our becoming guilty of the logical fallacy of mistaking the concomitant effects of a common cause for cause and effect.

The fundamental defect in the legal test of responsibility is that it is founded upon the consciousness of the individual. And while this is so, it is admitted in every book on mind published at the present day, even by pure metaphysicians, that the most important part of our mental operations takes place unconsciously. Consciousness is recognised to be merely a condition of mental action, which is not invariably present in those operations that it does usually accompany, and which is invariably absent in a great part of mental action. Physiologists have long taught this truth, which pure metaphysicians now recognise; and the pathologists who are engaged in the study of insanity have been driven quite independently to its recognition, from their observation

of the facts of mental disease. To reject the legal test of responsibility is not, then, a mere caprice or prejudice of the "mad doctors," but the legal test is rendered ridiculous by the first principles of every system of mental philosophy. The true responsibility of an individual is not in relation to his consciousness, but in relation to his power of volitional control over his mental operations. And when those who are engaged in the study of insanity affirm that there may be, by reason of disease, an inability to control an act which all the while is known to be wrong, they simply lay down a proposition which is in strict accordance with the first principles of a positive science of mind.*

But if it were right to accept the validity and sufficience of consciousness as a test of responsibility, how manifestly unjustifiable a proceeding it is to conclude from the phenomena of the consciousness of a sound mind as to the condition of the unsound mind! And that is exactly what the law demands should be done. Because an individual in perfect health feels that he has a conscious control over his ideas and actions, he assumes that the individual whose mind is prostrated by disease has a like power, and determines that he is culpable if he does not exercise it. It would be not one whit less absurd for the healthy man who has control of his limbs to insist on the punishment of the epileptic or the paralytic because he did not display such control. Nevertheless, this is the state of affairs which the present Lord Chancellor, the legal guardian of lunatics, would have continue as forming his ideal of perfection. In a speech in the House of Lords (March 11th, 1862) he said that he had "found an evil habit had grown up of assuming that insanity was a physical disease and not a subject of moral inquiry." This was an error to be rooted out: judges and juries should accept "their own moral conclusions;" and it was nowise necessary "that a man should have studied the subject of insanity in order to form a conclusion whether a man was or was not a lunatic." Notwithstanding such a positive state-

* "Homicidal Insanity." By Henry Maudsley, M.D., *Journal of Mental Science*, Oct., 1863. Many examples of homicidal insanity are brought forward, and grouped, according to their relations, as morbid states of the nervous system.

ment by one who is so highly placed, we do not fear that even a Lord Chancellor of England will succeed in putting back the hand of scientific progress on the dial-plate of time. If it must still, however, for a time be that we are to conclude from the revelations of a sound consciousness as to the condition of things in the diseased mind, at least let the induction be made from those phenomena of the sound mind in which there is the nearest approach to the phenomena of insanity. Whosoever can recall some of the operations of his mind in the delirium of a fever, or whosoever will reflect on his mental states in dreaming, may form a notion of the helpless condition in which the insane are permanently, and may then, perhaps, be more inclined to look with charitable feeling upon their acts. The most ardent worshipper of common-sense may remember occasions in his dreams when he terribly outraged common-sense, when for the life of him he could not do what he knew he ought to do, or could not leave undone what he clearly knew to be wrong. If he is sincerely anxious for truth he will not allow such a lesson to be thrown away; the life of the insane is a real dreaming, from which, unhappily, they do not awake. "No one who has not been made mad knows how terribly real the delusions of the insane are," was the expression of one who had recovered his reason. And it is to these suffering beings, deprived by a dreadful disease of their power of will, that the sound mind, arguing from its own consciousness, preaches, with a serene self-complacency, responsibility and the duty of self-control. There is nothing new, nothing strange in that; it was precisely this feeling that madmen might, if they would, act as healthy lookers-on felt that they themselves could, which dictated the whips, chains, and bars wherewith insanity was at one time treated; and it is precisely that same feeling in attendants on the insane which renders the management of them, and not of the patients, the difficulty of an asylum: they will not believe that the insane cannot think and act as they know they can themselves. When a patient's ribs are broken by brutal attendants in a badly-managed asylum, it is in consequence of that same error of the sound mind by which consciousness

of right and wrong is made the legal test of responsibility and many lunatics are hanged.

It is natural that the physician, looking at human action as an object of scientific study and at insanity as a disease, should become impatient of the injustice to the insane in the existing laws; but it is equally natural that the jurist, who regards man as a citizen and looks to the interests of society, should be jealous of interference with the punishment which the law awards to offences. No wonder that judges, from their point of view, have often pronounced the doctrine of impulsive insanity to be fraught with danger to society. Nay, some have gone so far as to say that, notwithstanding the doctrine be true, it is necessary still to punish the insane offender. A man not criminal in the eye of Heaven must be accountable to human law in order to deter others from crime, Lord Brougham on one occasion said. And Mr. Baron Bramwell, in pronouncing sentence on a lunatic at Lincoln (Dec. 6th, 1862), said "He was not sure that it is not more necessary to punish a madman than a sane one, so far as the protection of the public is concerned." On what tablet, then, is that law written by which society assumes the right of committing a great crime for its own protection? Against Mr. Baron Bramwell we might quote the words of the judge who tried Clark at Newcastle (Oct., 1861), and who wisely said, "It would be folly—almost blasphemy—to punish a man for an offence to which he has been instigated, not by his own guilty will, but by an affliction sent upon him by Providence itself." Punishments which offend the moral instincts of mankind must sooner or later bring the law into contempt; and it is tolerably certain that severe laws never yet prevented crime, very certain too that unjust laws have tended to increase it. If the law is not founded in justice, it is in the long run far more dangerous to the welfare of society than the escape of many criminals from legal punishment. To execute a madman is no punishment to him, who regards himself as a martyr; but his death is a punishment to those who are offended at the cruel folly of a law which, to use the words of Sir E. Coke, offers such "a miserable spectacle,

both against law and of extreme inhumanity and cruelty, and can be no example to others." If the doctrine of moral insanity is true, it cannot be injurious to the welfare of society to recognise it; but, on the contrary, it must be injurious to the welfare of society not to recognise it. The present uncertainty which exists as to whether a criminal will be convicted or acquitted as insane, and the accidental character of the result, afford a practical illustration of the evil effect of the endless controversy between the ideal man which the law sets up and the real man of medical science. If the criminal is acquitted as insane, there is often a loud and angry outburst of popular passion, and even lawyers think there has been a miscarriage of justice; if he is hanged, a number of truth-seeking men, who are calmly observing facts, know that a judicial murder has been committed. Can such a state of things, damaging as it is both to science and law, be in any way of advantage to the welfare of society?

V. Suggestions for the Amendment of the Criminal Law of Lunacy.

If the antagonism which at present exists between law and medicine is to be done away with, the result can only be brought about by a change in the law. These unfortunate dicta, which Mr. Justice Maule rejected at the time, but on which the law with regard to insanity now rests, are so inconsistent with facts that their validity cannot be accepted save on the condition of banishing altogether mental philosophy, giving up all observation, and ceasing for evermore to pursue science in the department of mind. As that cannot be, however, it is really only a question of time when, through the growth of enlightened opinion, the old garment shall drop off, and a righteous law shall be the expression of a higher social development. The law of insanity which exists now is not that which was laid down by Lord Coke and Sir M. Hale; with advancing knowledge the crude dicta of those judges have necessarily been abolished. Why, then, should the law which now prevails

be deemed eternal and all-sufficient? The study of insanity has only engaged attention within a very recent period; but the moment men began to occupy themselves in scientific observation of its phenomena, the cruel folly of the law was evident, and from that time to this the outcry against its injustice has become louder and louder.

The history of every department of knowledge shows that after the theological spirit had died away, the metaphysical spirit strenuously opposed for a time the advent of positive science; and the present attitude of the law in regard to insanity forcibly illustrates this metaphysical stage. The disposition to look on the insane as possessed with devils is altogether abandoned, but the metaphysical spirit which held entire sway for a time after the theological had disappeared, still inspires that unjust law which opposes the progress of positive science in insanity. Clinging to a last stronghold, it may struggle well, but it is fighting against the great law of human development, and it must fight in vain. And though men high in authority dogmatically uphold the ancient system, it matters not much; they are not immortal, and the spirit of progress is. Even if the present agitation subsides without any step in advance being made, or even if an Act of Parliament were passed determining that the old system should be maintained, the old system is none the less certainly doomed. Men will become mad, and madmen will commit crimes, and in spite of prejudice and in spite of clamour, science will declare the truth. Juries, too, will now and then be found enlightened enough to appreciate it; and if the voice of justice is unsuccessfully raised, it will be but a doubtful triumph for prejudice when science shall say, "You have hanged a madman."

We indicate briefly, in conclusion, certain changes which are urgently demanded.

1. To preserve its dignity and efficiency it is necessary that the law be brought into accordance with the state of knowledge in insanity. It is necessary that the different forms of partial insanity be recognised as disease, doing away with legal responsibility. The absurd and injurious metaphysical test of responsibility must be abolished, as con-

trary to science and justice. No attempt should be made at any precise definition of what insanity is or what it is not; but each case in which the plea is set up should be examined on its own merits, and the disease proved by a careful consideration of the previous history, character, and habits, and a systematic exposition of the various symptoms, physical and mental, with the inferences which they justify. Such a medical diagnosis should be demanded by the Court for its information. "The opinion of witnesses possessing peculiar skill," writes Mr. Smith—whom the Lord Chancellor praises as "a very admirable commentator, who died much too early"—"is admissible whenever the subject-matter of inquiry is such that inexperienced persons are unlikely to prove capable of forming a correct judgment on it without assistance—in other words, where the matter so far partakes of the nature of a science as to require a course of previous habit and study in order to the attainment of knowledge with regard to it."

When the present unsatisfactory line of legal responsibility is removed, it must still be that doubtful cases will sometimes occur. Between the tyranny of passion and the irresistible act which is the result of mental disease, there must occasionally be a difficulty in deciding. But in the majority of cases, there will be an obvious difference between the man who *will* not and him who *cannot* conform to the laws by which the well-being of society is secured. It would be unjustifiable to say that a being like Townley, who willingly enough accepts the benefit of the protection which the laws of society afford him, who has shown no symptoms of disease, and who, when evil passion has brought him into collision with laws, says he, as a free agent, rejects them, should be held guiltless of crime. All the circumstances of his crime, and his conversation after it, proved that Townley *would* not, and not that he *could* not, conform to the laws. The medicine which shall minister to such persons must always come, not from the physician, but from the law. If the case of Townley had been made a simple matter of medical diagnosis by impartial and skilful physicians, the examination must have failed to *prove* the existence of any

disease of which the crime was a result; whatever suspicion there might have been of an innate feebleness of moral nature, it would have been impossible to pronounce him guiltless of murder by reason of disease. To have done so would have been to discard all the rules of medical evidence in diagnosis.

2. A change in the existing method of obtaining scientific evidence is plainly most necessary; nothing can exceed the awkwardness and uncertainty of the present plan of proceeding in England. "An array of medical men," as Dr. Bucknill observes, "are marshalled by the attorneys on each side according to their preconceived opinions of the case. These medical witnesses may usually be divided into two classes—those who know something of the prisoner and nothing of insanity, and those who know something about insanity and nothing of the prisoner. They generally succeed in neutralizing each other's evidence, and in bringing the medical profession into contempt, at least among lawyers." Only by abolishing a system which puts a premium on unscrupulous advocacy—for it invites those who are more eager for notoriety than careful for truth—which practically excludes the tender conscience from giving scientific testimony in many cases, and which subjects medical science to extreme degradation, can the benefit of any change in the present law be reaped. Scandals must occur as heretofore, if no steps are taken to secure impartial scientific evidence.

The estimate of the scientific evidence of medical witnesses in insanity has now nearly reached the level assigned by Lord Campbell to that of another class of "experts," the so-called experts in handwriting. Of these, in a recent trial, the Vice-Chancellor, Sir J. P. Wood, said, "The next, and certainly the lowest class of evidence, was that of experts who knew nothing of the person, but formed their judgment from a comparison of several specimens of his writing." "Hardly any weight," said Lord Campbell, "is to be given to the evidence of what I may call scientific witnesses. *They come with a bias.*" "It has always," Dr. Bucknill writes, "appeared to us that the witness-box is no proper place for

the psychopathic physician in these cases; and that the very fact of his being called either 'for the Crown' or 'for the defence' renders it impossible for him to hold an impartial position; that if the cross-examination is often damaging to his character for exactitude in scientific knowledge, it is not less damaging to that of the Court itself as an institution whose purpose is to elicit truth and administer justice."

The remedy is an obvious one; it is to make the medical witnesses in matters of science, witnesses not for the prosecution or the defence, but witnesses called by the Court itself. Then would their evidence be freed from all suspicion of advocacy, and gain the authority in which it is now wanting. In France, when a criminal is suspected to be insane, the Court appoints a commission of medical men, or selects one man experienced in mental diseases, to examine into the case, and to report upon it; the whole life of the prisoner and the present symptoms are investigated, and the questions put and the answers to them are recorded for the information of the Court. "The French system, which places the scientific *expert* before the Court in an independent and impartial position, and affords him an ample opportunity to form a decided and trustworthy opinion, appears to be in every way worthy of imitation."* Such an alteration would not be any novelty in England; for in difficult questions of collisions on the sea and of salvage, where special knowledge is required, the Masters of the Trinity Company are called in to assist the Admiralty Court. And surely a shipwreck or a collision at sea is a fact much more within the knowledge of ordinary men than the diagnosis of cerebral disease where lunacy exists. By the adoption of some such plan, the Court would secure impartial and trustworthy evidence, on which it could act as might seem to it good, and the poor man would obtain that equality with the rich before the law which it is the boast of England to give him, but which he practically has not at present when insanity is pleaded.

* "Unsoundness of Mind in Relation to Criminal Acts." An Essay by J. C. Bucknill, M.D. Second Edition.

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